

#### Max Planck Institute for Demographic Research

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## **Academic Positions**

#### **Max Planck Institute for Demographic Research**

OMBUDSPERSON OPEN SCIENCE AMBASSADOR DEPUTY HEAD · LABORATORY OF POPULATION DYNAMICS AND SUSTAINABLE WELL-BEING EXECUTIVE COMMITTEE MEMBER . DEPARTMENT OF DIGITAL AND COMPUTATIONAL DEMOGRAPHY RESEARCH AREA CHAIR · DEPARTMENT OF DIGITAL AND COMPUTATIONAL DEMOGRAPHY SEMINAR SERIES CHAIR · DEPARTMENT OF DIGITAL AND COMPUTATIONAL DEMOGRAPHY RESEARCH SCIENTIST

Institut national d'études démographiques

ASSOCIATED RESEARCHER PHD STUDENT

PRE-DOCTORAL STUDENT

**University of Southern Denmark** 

PHD STUDENT RESEARCH ASSISTANT

#### Rostock, Germany

Jul 2023 - present Jun 2023 - present Jan 2023 - present Sept 2021 - present Sept 2021 - Dec 2022 Sept 2021 - Jan 2022 Jan 2020 - present Feb 2015 - Jul 2016

#### Aubervilliers, France

Jan 2020 - Dec 2022 Sep 2016 - Dec 2019

#### Odense, Denmark

Sep 2016 - Dec 2019

# **Education**

#### Ph.D. in Health Sciences

University of Southern Denmark · Institut national d'études démographiques

Thesis Title: New Approaches in Mortality Modelling and Forecasting (Online link) Supervisors: Dr. Carlo Giovanni Camarda; Prof. Jim Oeppen; Prof. Vladimir Canudas-Romo

European Doctoral School of Demography and MaxNetAging Research School MAX PLANCK INSTITUTE FOR DEMOGRAPHIC RESEARCH & SAPIENZA UNIVERSITÀ DI ROMA

# M.Sc. and B.Sc. in Economics and Social Sciences

BOCCONI UNIVERSITY - GRADE: 110/110 SUMMA CUM LAUDE

Thesis Title: Estimating and Forecasting Mortality Rates Supervisors: Prof. Carlo Ambrogio Favero; Prof. Marco Bonetti

Exchange student at Boston University, Department of Economics and Mathematics

Nov 2014 - Feb 2015

Odense, Denmark · Paris, France

Sep 2016 - Feb 2020

#### Rostock, Germany · Rome, Italy

Feb 2015 - Jul 2016

#### Milan, Italy

Sep 2006 - Nov 2011

# **Publications**

Authors listed as authorship order:

#### JOURNAL ARTICLES

- 19. Alburez-Gutierrez\*, D., U. Basellini\* and E. Zagheni (forthcoming). When do mothers bury a child? Heterogeneity in maternal age at offspring loss. Population Studies. Github R codes, MPIDR preprint. (\*): equal contribution
- 18. BASELLINI U., C.G. CAMARDA AND H. BOOTH (2023). Thirty years on: A review of the Lee-Carter method for forecasting mortality. International Journal of Forecasting, 39(3), 1033–1049. Online link, Github R codes, SocArXiv preprint
- 17. VAN RAALTE, A.A., U. BASELLINI, C.G. CAMARDA, M. NEPOMUCENO AND M.MYRSKYLÄ (2023). The dangers of drawing cohort profiles from period data: a research note. Demography, 60(6), 1689-1698. Online link, OSF R codes, SocArXiv preprint
- 16. ABURTO, J.M., U. BASELLINI, A. BAUDISH AND F. VILLAVICENCIO (2022). Drewnowski's index to measure lifespan variation: Revisiting the Gini coefficient of the life table. Theoretical Population Biology, 148, 1–10. Online link, Github R codes, arXiv preprint
- 15. BASELLINI U. AND C.G. CAMARDA (2022). Explaining regional differences in mortality during the first wave of Covid-19 in Italy. Population Studies, 76(1), 99–118. Online link, OSF R codes, SocArXiv preprint
- 14. NIGRI, A., J.M. ABURTO, U. BASELLINI AND M. BONETTI (2022). Evaluation of age-specific causes of death in the context of the Italian longevity transition. Scientific Reports, 12, 22624. Online link, OSF R codes, SocArXiv preprint
- 13. VANELLA, P., U. BASELLINI AND B. LANGE (2021). Assessing Excess Mortality in Times of Pandemics Based on Principal Component Analysis of Weekly Mortality Data - The Case of COVID-19. Genus, 77, 16. Online link, ArXiv preprint

- 12. RIFFE, T., E. ACOSTA, U. BASELLINI, THE COVERAGE-DB TEAM (2021). Data Resource Profile: COVerAGE-DB: a global demographic database of COVID-19 cases and deaths. *International Journal of Epidemiology*, **50**(2), 390-390f. Online link, OSF R codes, medRxiv preprint
- 11. BASELLINI U., D. ALBUREZ-GUTIERREZ, E. DEL FAVA, D. PERROTTA, M. BONETTI, C.G. CAMARDA AND E. ZAGHENI (2021). Linking excess mortality to mobility data during the COVID-19 pandemic in England and Wales. SSM-Population Health, 14, 100799. Online link, OSFR codes, SocArXiv preprint
- 10. CAMARDA, C.G. AND U. BASELLINI (2021). Smoothing, Decomposing and Forecasting Mortality Rates. *European Journal of Population*, **37**, 569–602. Online link, OSF R codes
- 9. Bonetti, M. and U. Basellini (2021). Epilocal: A real-time tool for local epidemic monitoring. *Demographic Research*, **44**(12), 307–332. Online link, Dedicated shinyapp, ArXiv preprint
- 8. PASCARIU, M.D., U. BASELLINI, J.M. ABURTO AND V. CANUDAS-ROMO (2020). The Linear Link: Deriving Age-Specific Death Rates from Life Expectancy. *Risks*, 8, 109. Online link, GitHub R codes
- 7. BASELLINI U., S. KJÆRGAARD AND C.G. CAMARDA (2020). An age-at-death distribution approach to forecast cohort mortality. *Insurance: Mathematics and Economics*, **91**, 129–143. Online link, GitHub R codes
- 6. ABURTO, J.M., F. VILLAVICENCIO, U. BASELLINI, S. KJÆRGAARD AND J.W. VAUPEL (2020). Dynamics of life expectancy and life span equality. *Proceedings of the National Academy of Sciences of the United States of America*, **117**(10), 5250–5259. Online link, Zenodo R codes
- 5. BASELLINI U. AND C.G. CAMARDA (2019). Modelling and forecasting adult age-at-death distributions. *Population Studies*, **73**(1), 119–138. Online link, GitHub R codes
- 4. Basellini U., V. Canudas-Romo and A. Lenart (2019). Location–Scale Models in Demography: A Useful Re-parameterization of Mortality Models. *European Journal of Population*, **35**, 645–673. Online link, GitHub codes
- 3. Sutter, A., S. Barton, M.D. Sharma, U. Basellini, D. Hosken and C.R. Archer (2018). Senescent declines in elite tennis players are similar across the sexes. *Behavioral Ecology*, **29**(6), 1351–1358. Online link
- 2. ARCHER, C.R., U. BASELLINI, J. HUNT, S.J. SIMPSON, K.P. LEE AND A. BAUDISH (2018). Diet has independent effects on the pace and shape of aging in *Drosophila melanogaster*. *Biogerontology*, **19**(1), 1–12. Online link
- 1. GIGLIARANO, C., U. BASELLINI AND M. BONETTI (2017). Longevity and concentration in survival times: the log-scale-location family of failure time models. *Lifetime Data Analysis*, **23**(2), 254–274. Online link, Dondena Working Paper

#### **BOOK CHAPTERS** (PEER-REVIEWED)

- 4. Bonetti, M., C. Gigliarano and U. Basellini (2021). The Gini concentration index for the study of survival. In N. Mukhopadhyay and P.P. Sengupta (eds.), *Gini inequality index: methods and applications*. Boca Raton, Chapman and Hall/CRC. Online link
- 3. Basellini U. and C.G. Camarda (2020). A Three-component Approach to Model and Forecast Age-at-death Distributions. In S. Mazzuco and N. Keilman (eds.), *Developments in Demographic Forecasting*, 105–129, Springer, Cham. Online link, GitHub R codes
- 2. Bergeron-Boucher, M.P., S. KJærgaard, M. Pascariu, J.M. Aburto, J.Alvarez, U. Basellini, S. Rizzi and J.W. Vaupel (2020). Alternative forecasts of Danish life expectancy. In S. Mazzuco and N. Keilman (eds.), *Developments in Demographic Forecasting*, 131–151, Springer, Cham. Online link
- 1. RIFFE, T., M.R. NEPOMUCENO AND U. BASELLINI (2020). Mortality modeling. In D. Gu and M.E. Dupre (eds.), *Encyclopedia of Gerontology and Population Aging*. Springer, Cham. Online link

#### **WORKING PAPERS & OTHER PUBLICATIONS**

- 6. BASELLINI, U. (2023). Open science practices in demographic research: an appraisal. SocArXiv. Online link
- 5. BADOLATO, L., A. DECTER-FRAIN, N.J. IRONS, M. MIRANDA, E. WALK, E. ZHALIEVA, M. ALEXANDER, U. BASELLINI AND E. ZAGHENI (2023). Predicting individual-level mortality with traditional and machine learning methods. MPIDR Working Paper. Online link
- 4. Bonetti\*, M., U. Basellini\* and A. Nigri (2023). The Average Uneven Mortality index: Building on the  $e^{\dagger}$  measure of lifespan inequality. SocArXiv. Online link. (\*): equal contribution
- 3. CONTE KEIVABU, R., U. BASELLINI AND E. ZAGHENI (2022). Racial disparities in deaths related to extreme temperatures in the United States between 1993 and 2005. MPIDR Working Paper. Online link
- 2. Basellini U. (2020). New Approaches in Mortality Modelling and Forecasting. PhD thesis. Odense: Syddansk Universitet / University of Southern Denmark. Online link
- 1. Basellini U. and C.G. Camarda (2018). A Three-Component Lee-Carter approach to decompose and forecast human mortality. *Proceedings of the 33rd International Workshop on Statistical Modelling*, Bristol (UK), 17–22. Proceedings link

# Invited and contributed talks

#### INVITED LECTURES

2024	University of Rostock, MSc Demography (Course material)	Rostock, Germany
2023	Escola Nacional de Ciências Estatísticas, MSc and PhD programs (Course material)	Rio de Janeiro, Bra.

#### **INVITED TALKS**

2023	Centre for Population Change - Connecting Generations Webinar (Youtube recording)	Online
2022	Workshop Climbing Mortality Models (Program)	Misurina, Italy
2022	Brazilian Association of Population Studies Webinar (YouTube recording)	Online
2022	Dondena Centre for Research on Social Dynamics and Public Policy (Slides)	Milan, Italy
2021	Annual Meeting of the Population Association of America, Discussant (PAA final program; slides)	Online
2020	IUSSP Webinar "Digital and computational approaches to study determinants and consequences of the	Online
	spread of COVID-19"(Program and video recording)	Online
2018	Workshop "Forecasting Danish Life Expectancy and Age at Retirement" (Talk)	Odense, Denmark
2018	Workshop "Inequality and Uncertainty in Length of Life" (Talk)	Tel Aviv, Israel
2017	Conference "MaxNetAging Annual Meeting" (Talk)	Rostock, Germany
2017	IUSSP Seminar "Mortality analysis and forecasting" (Talk)	New Delhi, India

#### **CONFERENCES AND WORKSHOPS**

Since 2016, I have regularly presented my work at the following peer-reviewed conferences: European Population Conference, Annual Meeting of the Population Association of America, Italian Population Days Conference, IUSSP International Population Conference. I have also occasionally presented my work at these conferences, workshops or events: INED Doctoral Research Day, International Workshop on Statistical Modelling, International Longevity Risk and Capital Markets Solutions Conference, Human Mortality Database Symposium, Italian Statistical Society Conference, Nordic-Baltic Biometric Conference.

## Awards\_

2022	<b>Günther Beyer Award</b> Best Paper by Early Career Scholar at EPC, joint with D. Alburez-Gutierrez (EPC link)	Groningen, Neth.
2022	<b>German Society for Demography Annual Conference</b> Best Paper Award to Patrizio Vanella for our paper	Online
	(DGD link)	Online
2021	Jan M. Hoem Paper Award, Best Paper by a Junior Researcher at the MPIDR (MPIDR link)	Rostock, Germany
2021	PAA Blue Ribbon Poster Award	Online
2009-11	<b>Bocconi Merit Awards Scholarship</b> Full waiver of tuition fees (20,000€) and yearly stipend (3,500€)	Milan, Italy

# **Teaching**

Demographic Forecasting	INED, Paris
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European Doctoral School of Demography, Cohort 2023-2024 (Course material 2024)

Presentations in LTEX various

2024

EUROPEAN DOCTORAL SCHOOL OF DEMOGRAPHY, COHORTS 2017-18, 2018-19 & 2023-2024 (COURSE MATERIAL) 2018, 2019, 2024

#### Foundations in Statistical Demography MPIDR, Rostock

International advanced studies in DEMography (IDEM) & International Max Planck Research School for 2024
Population, Health and Data Science (IMPRS-PHDS). Jointly Taught with Carlo G. Camarda.

### **Population Projections**Online & Barcelona

EUROPEAN DOCTORAL SCHOOL OF DEMOGRAPHY, COHORT 2019-2020, 2020-2021 (ONLINE COURSE) & 2021-2022, 2022-2023 (IN PRESENCE). (COURSE MATERIAL 2020, 2021, 2022, 2023)

#### Advances in Mortality Forecasting Online course

International advanced studies in DEMography (IDEM) & International Max Planck Research School for 2021, 2022

Population, Health and Data Science (IMPRS-PHDS). Jointly taught with Carlo G. Camarda (Course material)

#### Survival Analysis in Medical Research Odense, Denmark

TEACHING ASSISTANT, UNIVERSITY OF SOUTHERN DENMARK, PHD IN HEALTH SCIENCES 2015

# **Professional Positions**

Elected Ombudsperson of the MPIDR, responsible to handle cases of scientific misconducts. 2023 - present Ombudsperson **Open Science Ambassador** Responsible for spreading Open Access knowledge and practices at the MPIDR. 2023 - present

> **Deputy Head** Research-administrative role in support of a group of five researchers and four doctoral students. 2023 - present

> > Faculty member of the PhD program "International Max Planck Research School for Population,

**Faculty** 

Health and Data Science" (IMPRS-PHDS). 2022 - present

Lecturer of the "European Doctoral School of Demography" (EDSD), 2018 - present Lecturer

**Research Area Chair** Research-administrative role in support of a group of three researchers and three doctoral students. 2021 - 2023. **Workshop Chair** Organization, chairing and moderation of 17 scientific workshops during the MPIDR Summer Incubator. 2022

**Seminar Series Chair** Organization, chairing and moderation of weekly invited external or internal talks of the Laboratory. 2021 - 2022

# **Academic Supervision**

#### **Mentor of postdoc**

Yuxi Wang (with C.G. Camarda), post-doc and Marie-Curie Fellowship recepient since 2023. 2023 -

#### **MPIDR**

#### **Mentor of the MPIDR Summer Incubator Program**

1. First edition (2022): 6 PhD and MSc students (with M. Alexander & E. Zagheni). Working Paper (WP): 10.4054/MPIDR-WP-2023-008

2. Second edition (2023): 6 PhD and MSc students (with A. Akbaritabar & E. Zagheni). 2022 -**MPIDR WP:** available upon request

3. Third edition (2024): 4 PhD and MSc students (with I. Chen & M. Alexander)

#### **Mentor of PhD student**

1. Ana Cristina Gomez Ugarte (with C.G. Camarda, F. Janssen & E. Zagheni), PhD student at the MPIDR since 2022. WP (first thesis chapter): available upon request 2022 -

2. Maria Laura Miranda (with E. Zagheni), PhD student at the MPIDR since 2023.

#### **MPIDR**

#### External advisor of MSc student

2022 - 23 Maria Laura Miranda (with C. Turra) successfully defended her MSc thesis on "Life expectancy forecast in São MPIDR Paulo city, Brazil, in the context of Covid-19", University of Minas Gerais

### **Mentor of visiting PhD student**

- 1. Risto Conte Keivabu (European University Institute). WP: 10.4054/MPIDR-WP-2022-028
- 2. Emanuele Depaoli (University of Padova)
- 3. Daniel Zazueta Borboa (Netherlands Interdisciplinary Demographic Institute). WP: available upon 2021 - 23 **MPIDR** 
  - 4. Ainhoa-Elena Leger (University of Southern Denmark)

#### Mentor of EDSD pre-doctoral student

- 1. Silvio Cabral Patricio (with E. Zagheni) successfully defended his thesis "Is that a mortality deceleration or just a misspecified model?"
- 2. Dorothee Beckendorff (with S. Lohmann) successfully defended her thesis "Who gets to go and who must stay? Examining the links between climate change induced migration and educational attainment in Chile'

3. Maria Laura Miranda (with E. Acosta and E. Zagheni) successfully defended her thesis "The different measures of period shocks on mortality - the case of COVID-19"

#### **MPIDR**

# **Reviewing Services**

2020 - 23

Demographic Research, April 2022 - present. Responsible for approx. 8 manuscript per year, feedback on **Associate Editor** Special Issues proposals, participation in Editorial Board meetings

Reviewed for 25 different journals (also multiple times), including eLife, The Lancet Regional Health - Europe, Demography, Population Studies, BMJ Open, BMC Public Health, ASTIN Bulletin, European Journal of Population, **Journal Review** and Demographic Research

**PhD** thesis External assessor for Paola Vazquez-Castillo PhD midterm evaluation, University of Southern Denmark (2023) **Conferences** Review of papers for the 29th IUSSP International Population Conference (2021)

# **Committees and Administrative Experiences**

**Open Science Workshop** Chair of the Organizing Committee for the Second Rostock Open Science Workshop

MPIDR Summer Incubator Co-organizer of the 2022, 2023 and 2024 Population and Social Data Science Summer Incubator Program

Member of the Search Committee for the recruitment of postdocs (2021 & 2023), PhD students (2021 & 2022), Recruitment

visiting PhD/MSc students (2022 & 2024), EDSD students (2022 & 2024), research assistants (2021 & 2023)

**Best Paper Award** Member of the Scientific Committee for the Jan M. Hoem Paper Award (2023)

Member of the Election Committee for the Academic Staff Representative and Ombudsperson

at the MPIDR (2020)

# Other activities

#### Participation to research groups & projects

- Member of the Laboratory "Population Dynamics and Sustainable Well-Being", MPIDR. January 2023 present. Collaboration with national and international colleagues on five projects: "Forecasting Population-level Mortality"; "Forecasting Individual-level Mortality"; "Formal and Statistical Approaches to the Study of Inequalities in Mortality"; "Demographic Perspectives on Kin Availability and Kin Loss"; "Analyzing and Monitoring the Early Spread of COVID-19: A Demographic Perspective"
- Member of the Research Area "Aging and Generational Processes", Laboratory of Digital and Computational Demography, MPIDR. January 2020December 2022. Collaboration with national and international colleagues on four projects: "New Perspectives in Mortality Forecasting"; "Formal
  Demographic Approaches to the Study of Inequalities in Mortality and Kinship Resources"; "Estimating and Projecting Offspring Mortality over
  the Life Course for all Countries of the World"; "Analyzing and Monitoring the Spread of COVID-19 in Italian Regions and Provinces: A Demographic
  Perspective"
- Member of the Mortality, Health and Epidemiology Unit, INED. September 2016 December 2022. Collaboration with national and international colleagues on the project: "Geographical disparities in mortality: analysing causes of death to inform health transition"
- Member of the "Forecasting" cluster, Max-Planck Odense Center on the Biodemography of Aging, University of Southern Denmark. November 2014 February 2015. Collaboration with national colleagues

#### Parental leave

Four months of parental leave in 2021

# **Post-graduate education**

2021	Topics in Digital and Computational Demography	Online	
	International Advanced Studies in Demography (IDEM). Instructors: Prof. E. Zagheni et al.		
2021	Advanced Methods for Causal Inference with Observational Data	Online	
2021	International Advanced Studies in Demography (IDEM). Instructors: Dr. P. Eibich, Dr. A. Lorenti		
2020	Data visualization: the art/skill cocktail	Online	
	International Advanced Studies in Demography (IDEM). Instructor: Dr. I. Kashnitsky		
2020	Multistate Models: Analysis from event histories and panel data	Rostock, Germany	
2020	IDEM. Instructors: Dr. J. Gampe, Prof. H. Putter, Prof. A. van den Hout		
2017	Smoothing Demographic Data	Rostock, Germany	
2017	International Advanced Studies in Demography (IDEM). Instructor: Dr. C.G. Camarda		
2014	Probabilistic Population Projections: Theory and Practice	Rostock, Germany	
	International Advanced Studies in Demography (IDEM). Instructors: Prof. A. Raftery and Prof. H. Sevcikova		
2013	Statistical methods for population-based cancer survival analysis		
	Summer School on Modern Methods in Biostatistics and Epidemiology. Instructors: Prof. P.W. Dickman and	Treviso, Italy	
	Prof. P.C. Lambert		

# Skills\_

Programming R, MT<sub>F</sub>X, STATA, SAS, EViews, SPSS, Matlab

**Mathematics** 97th percentile (grade: 800/800) in the quantitative GRE exam

Languages Italian (mother tongue), English (fluent), Portuguese (intermediate), French & Spanish (basic)