



WIC Hybrid Colloquium

Cheating Death: Beating the odds to longer survival

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11:00 – 12:00 (CEST)



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Abstract:

As people live longer, it becomes a less exceptional achievement to reach very old age. Research on extreme survival has mostly focused on exceptional, record-breaking individuals to investigate the limits of longevity. We instead frame the problem as how many times does somebody need to cheat death in order to reach a specific target age and beat the odds of dying, given the average mortality experience of their cohort. We postulate that the probability to consecutively attain one's expected age at death converges to e^{-1} , as the number of times one beats the odds of dying increases. We confirm this result for very different mortality schedules, both simulated and historical. Beating the odds of dying in order to reach a target age can be interpreted as the probability of reaching a new life. Consequently, the number of lives needed to reach a target age can be expressed as a simple logarithm transform of the probability to reach this age. By assessing the odds of beating one's expected age at death, we address longstanding demographic questions in a novel way, for example how many times did Jeanne Calment beat the odds of dying before becoming the oldest person to have ever lived. This approach is connected to Jim Vaupel's seminal work on resuscitation and second-chance models, as well as his lifelong effort in modelling and understanding extreme longevity.

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About the presenter:

I am a formal demographer researching the methodological challenges in accurately estimating health and mortality differentials. I also research the longevity of specific subgroups and selection in mortality studies. In 2018, I joined the Health and Longevity research group headed by Dr. Marc Luy at the Vienna Institute of Demography as a research scientist. In the framework of the ERC project "Levels and Trends of Health Expectancy: Understanding its Measurement and Estimation Sensitivity", I mainly perform sensitivity analysis of healthy life expectancy indicators regarding different measurement and estimation methods and its implications for healthy ageing. I am also interested in interdisciplinary research and epistemological concerns in the field of population studies, such as limits of our methods and disciplinary boundaries and also improving the outreach of demography among younger scholars.

I hold a bachelor degree in Social Sciences from the Minas Gerais State University in Brazil, and a Master's and Doctorate degree in Demography from the Centre of Development and Regional Planning (CEDEPLAR-UFMG, Brazil).

The Wittgenstein Centre is a col- laboration among the Austrian Academy of Sciences (OeAW), the International Institute for Applied Systems Analysis (IIASA) and the University of Vienna.