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EDUCATION

Princeton University - Office of Population research, Princeton, USA
Ph.D. in the Program in Population Studies   **2005**
Univ. Paris-I Panthéon Sorbonne – Institut de Démographie de l'Université de Paris (IDUP), France
M.A. in Demography - DESS d'Expert Démographe   **1987**
Université René Descartes Paris-V, France
B.A. in Sociology   **1985**

RESEARCH INTERESTS

- Direct and indirect mortality and fertility estimations, parametric demographic models and population reconstructions and projections – active collaboration with researchers from the University of Washington research group on modeling uncertainty in demographic estimates and projections, the University of Pennsylvania on modeling age pattern of under-five mortality and Louvain-la-Neuve on adult mortality estimation in Africa.

- HIV/AIDS, social demography, social networks and social participation – former research collaborator of the Malawi Diffusion and Ideational Change Project (organized by the University of Pennsylvania and the College of Medicine of Malawi). Dissertation Topic: "Effects of social interactions on individual HIV/AIDS attitudes and behaviors in rural Malawi". Advisor: Joshua Goldstein. Additional Committee Members: Susan Watkins and German Rodriguez

- Small area statistics, geospatial statistical analysis, statistical data integration and fusion

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POSITIONS

.   *United Nations Population Division – Population Estimates and Projection Section, New York, USA*
Section Chief   **2018/6 – present**
Responsible for planning and supervising the work of the Section including the preparation of World Population Prospects, the official United Nations population estimates and projections, prepared for all countries or areas of the world and covering the global population from 1950 to 2100, as well as the preparation of the United Nations estimates and projections of urban, rural and city populations ; Oversees the preparation of reports, briefs and other documentation and the provision of substantive support to the annual session of the Commission on Population and Development and other United Nations bodies, and the organization and servicing of expert group meetings and other technical meetings, particularly regarding the development of estimation and projection methodologies, in collaboration with the Demographic Analysis Section and the Demographic Methods and Data Systems Unit, keeping abreast of new scientific developments in demography.

United Nations Population Division - Mortality Section, New York, USA

Section Chief   **2014 – 2018/5**
Conducts mortality and methodology research that aims to improve mortality models with a view to improving the Division's population estimates and projections ; Plans and oversees the preparation of technical and substantive reports on levels and trends of mortality in all countries of the world, and the determinants and consequences of mortality and morbidity trends in both developed and developing countries ; Leads and supervises the organization of research projects and other substantive activities such as the preparation of expert group meetings, seminars, etc. on mortality and related issues ; Participates in international, regional or national meetings to present the results of research, provide substantive expertise on issues, or hold substantive and organizational discussions with representatives of

other institutions.

United Nations Population Division - Population Estimates and Projection Section, New York, USA
Population Affairs Officer   **2010 – 2014**
                                                                                    2004 – 2009
Prepare estimates and projections for national, rural, urban and city populations;
evaluate and adapt new methodologies for demographic analysis and forecasting;
draft technical studies and research reports on population trends, especially in the
context of the UN World Population Prospects, and World Urbanization Prospects bi-
annual assessments and revisions.

United Nations Population Division - Population Policy Section, New York, USA
Population Affairs Officer   **2009 – 2010**
Monitor, report, and analyze information on the development and implementation of
population policies in selected countries ; improve the tools and processes for the
preparation and dissemination of the United Nations World Population Policies, and
results of the official inquiry conducted every five years on trends in Governments'
views and policies on population.

United Nations Statistics Division – Social and Demographic Statistics Branch, New York, USA
Consultant on Demographic Statistics and Databases   **2000**
Assist in the creation of a new Intranet version of the UN Demographic Yearbook
Database

United Nations Statistics Division – Social and Demographic Statistics Branch, New York, USA
CD-ROM Software Consultant   **1999**
Design and production of the CD-ROM edition of United Nations Demographic
Yearbook Historical Supplement (1948-1997)

United Nations Statistics Division – Technical Cooperation Branch, New York, USA
Computer Software Specialist   **1989-1998**
Prepare technical papers, software documentation and support materials; conduct
training workshops and provide technical assistance on data collection and
processing for census, surveys and civil registration, indirect demographic
estimates, population projections, demographic software applications, development
of population databases, and geographic information systems.

BETURE-SETAME - IAURIF, Paris, France
Research Analyst   **1988-1989**
Production of population projections and socio-economic and demographic studies
for the Greater Paris regional urban development planning and research institute.

Statistics Canada - Demographic Division, Ottawa, Canada
Consultant   **1988**
Development and evaluation of software and techniques for population projections,
demographic simulations and parametric models for national and provincial
projections of the Canadian population.

PUBLICATIONS IN PEER-REVIEW JOURNALS

- Verhulst, A., J. R. Prieto, N. Alam, H., Eilerts-Spinelli, D. J., Erchick, P. Gerland, ... & M. Guillot. (2022). Divergent age patterns of under-5 mortality in south Asia and sub-Saharan Africa: a modelling study. *The Lancet global health*. doi: 10.1016/S2214-109X(22)00337-0
- Sharrow, D., L. Hug, D. You, L. Alkema, R. Black, S. Cousens, T. Croft, V. Gaigbe-Togbe, P. Gerland, et al. (2022). Global, regional, and national trends in under-5 mortality between 1990 and 2019 with scenario-based projections until 2030: a systematic analysis by the UN Inter-agency Group for Child Mortality Estimation. *The Lancet Global Health*, 10(2), e195-e206. doi: 10.1016/S2214-109X(21)00515-5
- Guillot, M., J. Romero Prieto, A. Verhulst, P. Gerland (2022). Modeling age patterns of under-5 mortality: Results from a log-quadratic model applied to high-quality vital registration data. *Demography*, 59(1), 321-347. doi: 10.1215/00703370-9709538

- Chao, F., P. Gerland, A. R. Cook, C. Z. Guilmoto, L. Alkema (2021). Projecting sex imbalances at birth at global, regional and national levels from 2021 to 2100: scenario-based Bayesian probabilistic projections of the sex ratio at birth and missing female births based on 3.26 billion birth records. *BMJ Global Health*, 6(8), e005516.

- Masquelier, B., L. Hug, D. Sharrow, D. You, C. Mathers, P. Gerland, et al. (2021). Global, regional, and national mortality trends in youth aged 15–24 years between 1990 and 2019: a systematic analysis. *The Lancet Global Health*, 9(4), e409-e417.

- Chao, F., P. Gerland, A.R. Cook, and L. Alkema (2019). Systematic assessment of the sex ratio at birth for all countries and estimation of national imbalances and regional reference levels. *Proceedings of the National Academy of Sciences*. 116(19), 9303-9311. doi:www.pnas.org/cgi/doi/10.1073/pnas.1812593116

- Sevcikova, H., A. Raftery, and P. Gerland (2018). *Probabilistic Projection of Subnational Total Fertility Rates*. *Demographic Research*, 38(60), 1843-1884. doi:10.4054/DemRes.2018.38.60

- Swaminathan, S., P. Jha and Million Death Study-Indian Council of Medical Research (MDS-ICMR) Collaborators (2017). "Changes in cause-specific neonatal and 1-59 month child mortality in India from 2000 to 2015: nationally-representative mortality study of 1.3 million homes". *Lancet Global Health*. Volume 390, Issue 10106, 1972 – 1980. Doi:10.1016/S0140-6736(17)32162-1

- Sanderson, W.C., S. Scherbov, and P. Gerland. (2017). "Probabilistic population aging." *PLoS ONE* 12(6):e0179171. Doi: 10.1371/journal.pone.0179171.

- Masquelier, B., J.W. Eaton, P. Gerland, F. Pelletier, and K.K. Mutai. (2017). "Age patterns and sex ratios of adult mortality in countries with high HIV prevalence." *Aids* 31 Suppl 1:S77-S85. Doi: 10.1097/QAD.0000000000001332.

- Gerland, P., A. Biddlecom, and V. Kantorová (2016). "Fertility Decline Patterns and Scenarios of Future Fertility Change in Sub-Saharan Africa". *Population and Development Review*, 43(S1), 21-38.

- Wheldon, M. C., A. E. Raftery, S. J. Clark and P. Gerland. (2016). "Bayesian population reconstruction of female populations for less developed and more developed countries". *Population Studies,* 70(1), 21-37. doi: 10.1080/00324728.2016.1139164

- Ram, U., P. Jha, P. Gerland, R. J. Hum, P. Rodriguez, W. Suraweera, . . ., and F. Ram (2015). Age-specific and sex-specific adult mortality risk in India in 2014: analysis of 0·27 million nationally surveyed deaths and demographic estimates from 597 districts. *The Lancet Global Health, 3*(12), e767-e775. doi:10.1016/s2214-109x(15)00091-1

- You, D., Hug, L., Ejdemyr, S., Idele, P., Hogan, D., Mathers, C., Gerland, P., New, J.R., Alkema, L. (2015). "Global, regional, and national levels and trends in under-5 mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Inter-agency Group for Child Mortality Estimation". *The Lancet*. 8 Sept. doi:10.1016/S0140-6736(15)00120-8

- Wheldon, M. C., Raftery, A. E., Clark, S. J., and Gerland, P. (2015). "Bayesian reconstruction of two-sex populations by age: estimating sex ratios at birth and sex ratios of mortality". *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 178(4), 977-1007. doi:10.1111/rssa.12104

- Bijak, J., Alberts, I., Alho, J., Bryant, J., Buettner, T., Falkingham, J.C., Forster, J.J., Gerland, P., Keilman, N., and King, T. (2015). "Probabilistic population forecasts for informed decision making." *Journal of Official Statistics*. (Letter to the Editor) Vol. 31, No. 4, pp. 537–544, doi:10.1515/JOS-2015-0033

- Alkema, L., P. Gerland, A. Raftery, and J. Wilmoth. 2015. "The United Nations Probabilistic Population Projections: An Introduction to Demographic Forecasting with Uncertainty." *Foresight: The International Journal of Applied Forecasting* (37):19-24.

- Gerland, P., Raftery, A. E., Ševčíková, H., Li, N., Gu, D., Spoorenberg, T., Alkema, L., Fosdick, B.K., Chunn, J., Lalic, N., Bay, G., Buettner, T., Heilig, G.K., Wilmoth, J. (2014). "World population stabilization unlikely this century". *Science*, 346(6206), 234-237. doi:10.1126/science.1257469

- Gerland, P. (2014). "UN Population Division's Methodology in Preparing Base Population for Projections: case study for India". *Asian Population Studies*, 10(3), 1-30. doi:10.1080/17441730.2014.947059

- Raftery, A. E., Alkema, L., and Gerland, P. (2014). "Bayesian Population Projections for the United Nations". *Statistical Science*, 29(1), 58-68. doi:10.1214/13-STS419

- Raftery, A., Lalic, N., and Gerland, P. (2014). Joint probabilistic projection of female and male life expectancy. *Demographic Research*, 30(27), 795-822. doi:10.4054/DemRes.2014.30.27

- Li, N., R. Lee, and P. Gerland (2013). "Extending the Lee-Carter Method to Model the Rotation of Age Patterns of Mortality Decline for Long-Term Projections". *Demography*, 50:2037–2051. doi:10.1007/s13524-013-0232-2

- Gu, D., P. Gerland, K. Andreev, N. Li, T. Spoorenberg, G. Heilig (2013). "Old Age Mortality in Eastern and South-

Eastern Asia". *Demographic Research*, 29(38), 999-1038. doi: 10.4054/DemRes.2013.29.38

- Raftery, A. E., J. E. Chunn, P. Gerland, and H. Ševčíková (2013). "Bayesian Probabilistic Projections of Life Expectancy for All Countries". *Demography*, 50(3), 777-801. doi: 10.1007/s13524-012-0193-x
- Wheldon, M. C., A. E. Raftery, S. J. Clark, and P. Gerland (2013). "Reconstructing Past Populations with Uncertainty from Fragmentary Data". *Journal of the American Statistical Association*, 108(501), 96-110. doi: 10.1080/01621459.2012.737729
- Raftery, A. E., N. Li, H. Ševčíková, P. Gerland, and G. K. Heilig (2012). "Bayesian probabilistic population projections for all countries". *Proceedings of the National Academy of Sciences*, 109(35), 13915-13921. doi: 10.1073/pnas.1211452109
- Guillot, M., P. Gerland, F. Pelletier, and A. Saabneh (2012). "Child Mortality Estimation: A Global Overview of Infant and Child Mortality Age Patterns in Light of New Empirical Data". *PLoS Medecine*, 9(8), e1001299. doi: 10.1371/journal.pmed.1001299
- Alkema, L., A. Raftery, P. Gerland, S.J. Clark, and Pelletier, F. (2012). "Estimating Trends in the Total Fertility Rate with Uncertainty Using Imperfect Data: Examples from West Africa." *Demographic Research*, 26(15):331-362. doi: 10.4054/DemRes.2012.26.15
- Dionne, K.Y., P. Gerland, S. Watkins (2011). "AIDS Exceptionalism: Another Constituency Heard From." *AIDS and Behavior*, 1-7 ; doi: 10.1007/s10461-011-0098-5
- Alkema, L., A.E. Raftery, P. Gerland, S.J. Clark, F. Pelletier, T. Buettner, and G. K. Heilig (2011). "Probabilistic Projections of the Total Fertility Rate for All Countries". *Demography*, 48, 815–839 ; doi: 10.1007/s13524-011-0040-5
- Brown, T., L. Bao, A.E. Raftery, J.A. Salomon, R.F. Baggaley, J. Stover, and P. Gerland (2010). "Modelling HIV epidemics in the antiretroviral era: the UNAIDS Estimation and Projection package 2009. *Sexually Transmitted Infections.* October 2010, Volume 86, Supplement 2, pp. ii3-ii10; doi: 10.1136/sti.2010.044784 - http://sti.bmj.com/content/86/Suppl_2.
- Bongaarts, J., F. Pelletier, and P. Gerland. (2010). "How many more AIDS deaths?" *Lancet* 375(9709):103-104. doi: 10.1016/S0140-6736(09)61756-6
- Weinreb, A., P. Gerland, and P. Fleming (2008). "Hotspots and Coldspots: Household and Village-level Variation in Orphanhood Prevalence in Rural Malawi". *Demographic Research*. Volume 19 - Article 32. 1217–1248. 15 Jul 2008. doi:10.4054/DemRes.2008.19.32.
- Gerland, P., D.M. Vu, S. Kohút and K. Irová (2000). "Applications of geographical and statistical databases for population activities: some strategies and experiences." *The Journal of Cities and Regions, SCORUS*, GIS special - November 2000. ISSN 1568-167X. pp. 63-75.

BOOK CHAPTERS

- Sanderson W, S. Scherbov, and P. Gerland (2018). "The end of population aging in high-income countries". *Vienna Yearbook of Population Research* (Volume 16, pp. 1-13). Vienna, Austria: Austrian Academy of Sciences. doi:10.1553/populationyearbook2018
- Li, N., Mi, H., & Gerland, P. (2018). Using Child, Adult, and Old-Age Mortality to Establish a Developing Countries Mortality Database (DCMD). In *Demography and Health Issues* (pp. 51-62). Springer, Cham.
- Ševčíková H, Li N, Kantorová V, Gerland P, Raftery AE. (2016). Age-Specific Mortality and Fertility Rates for Probabilistic Population Projections. In: Schoen R, editor. *Dynamic Demographic Analysis*. Cham: Springer International Publishing; 2016. p. 285-310. doi:10.1007/978-3-319-26603-9_15
- Booth, H., and Gerland, P. (2015). Demographic Techniques: Data Adjustment and Correction. In J.D. Wright (editor-in-chief) (Ed.), *International Encyclopedia of the Social & Behavioral Sciences, 2nd edition* (Vol. 6, pp. 126–137). Oxford: Elsevier. doi:10.1016/B978-0-08-097086-8.31011-X
- Reniers, G., B. Masquelier, P. Gerland (2011). "Chapter 24: Adult mortality trends in Africa". Book chapter prepared for the *International Handbook of Adult Mortality*, Richard G. Rogers and Eileen M. Crimmins (eds.), Springer. - PWP-OPR-2010-002 (http://papers.ccpr.ucla.edu/download.php?paper=PWP-OPR-2010-002)
- Bongaarts, J., F. Pelletier, and P. Gerland (2011). "Chapter 7: Global Trends in AIDS Mortality". Book chapter prepared for the *International Handbook of Adult Mortality*, Richard G. Rogers and Eileen M. Crimmins (eds.), Springer. 2011. – Presented as paper at the Population Association of America 2010 Annual Meeting - 15-17 April 2010, Dallas, Texas. - http://paa2010.princeton.edu/download.aspx?submissionId=100600

CONFERENCE PAPERS

- Gonnella, G., V. Kantorová, P. Gerland, M.C. Wheldon (2025). *Cohort Fertility Measures Derived From WPP 2024: Global, Regional, and Country Analysis*. Paper presented at the Annual Meeting of the Population Association of America, Washington DC. https://events.rdmobile.com/Lists/Details/2774283

- Chao, F., P. Gerland, et al. (2025). Estimating Levels and Trends in Adult Mortality Rates in Countries With High HIV Prevalence, 1950–2023. Paper presented at the Annual Meeting of the Population Association of America, Washington DC. https://events.rdmobile.com/Lists/Details/2774584

- Houle, B., J. Muir, S. Hertog, F. Pelletier, S.J. Clark, P. Gerland (2022). *Application of a Singular Value Decomposition-Based Factorization and Parsimonious-Component Model of Mortality to HIV Epidemics in Africa*. Paper presented at the Annual Meeting of the Population Association of America. https://paa.confex.com/paa/2022/meetingapp.cgi/Paper/26627

- Verhulst, A., J.R. Prieto, A. Nurul, P. Gerland, …, M. Guillot (2021). *Identifying New Age Patterns of Under-5 Mortality Using the Under-5 Mortality Database*. In XXIXe Congrès international de la population de l'UIESP 2021 (IPC 2021). https://hal.archives-ouvertes.fr/hal-03543874/

- de Oliveira Carneval, R. and P. Gerland (2021). Analyzing the quality of age reporting from population censuses for all countries of the world: 1950-2020 census rounds. Paper presented at the *XXIX IUSSP International Population Conference*, Hyderabad, India (virtual).

- Verhulst, A., J.R. Prieto, N. Alam, P. Gerland, et al. (2021). *Identifying New Age Patterns of Under-5 Mortality Using the Under-5 Mortality Database*. Paper presented at the Annual Meeting of the Population Association of America. https://submissions2.mirasmart.com/PAA2021/ViewSubmissionFile.aspx?sbmID=3003

- Guillot, M., A. Verhulst, J.R. Prieto, P. Gerland (2019). *Modeling Age-Specific Mortality by Detailed Age Between 0–5 Years: Results From a Log-Quadratic Model Applied to High-Quality Vital Registration Data*. Paper presented at the Annual Meeting of the Population Association of America, Austin, TX http://paa2019.populationassociation.org/abstracts/193268

- Li, N., H. Mi, P. Gerland, C. Li and L. Sun (2018). *Establishing a Developing Countries Mortality Database (DCMD) on the Empirical Basis of Child, Adult, and Old-Age Mortality*. Paper presented at the Annual Meeting of the Population Association of America, Denver, CO. https://paa.confex.com/paa/2018/meetingapp.cgi/Paper/18607

- Chao, F., P. Gerland, A.R. Cook (2018). *A Systematic Assessment of National, Regional and Global Levels and Trends in the Sex Ratio at Birth and Identification of Countries With Outlying Levels*. Paper presented at the Annual Meeting of the Population Association of America, Denver, CO. https://paa.confex.com/paa/2018/meetingapp.cgi/Paper/20250

- Sevcikova, H, A. Raftery, P. Gerland (2017). *Probabilistic Projection of Subnational Total Fertility Rates*. Paper presented at the Annual Meeting of the Population Association of America, Chicago, IL. https://paa.confex.com/paa/2017/meetingapp.cgi/Paper/15203

- Sanderson, W.C., S. Scherbov, P. Gerland (2017). *Probabilistic Population Aging*. Paper presented at the Annual Meeting of the Population Association of America, Chicago, IL. https://paa.confex.com/paa/2017/meetingapp.cgi/Paper/13640

- Li, N., H. Mi, and P. Gerland (2017). *Using Child, Adult, and Old-age Mortality to Establish a Developing Countries Mortality Database (DMD)*. Paper presented at the 17th Applied Stochastic Models and Data Analysis International Conference (ASMDA2017), 6 - 9 June 2017, London, UK. http://www.asmda.es/images/Corrected-BOOK_OF_ABSTRACTS-ASMDA2017-5-22.pdf

- Chao, F., L. Alkema, P. Gerland (2016). *A systematic assessment of national, regional, and global levels and trends in the sex ratio at birth and identification of countries with outlying levels*. Paper presented at the Annual Meeting of the Population Association of America, Washington, DC. https://paa.confex.com/paa/2016/meetingapp.cgi/Paper/7070

- Gerland, P., A.E. Biddlecom, V. Kantorova, S. Kisambira, T. Spoorenberg, C.C. Sawyer, L. Bassarsky, F. Pelletier, P. Nahmias (2016*). Demography is not destiny: probabilistic scenarios of future fertility change in sub-Saharan Africa*. Paper presented at the Annual Meeting of the Population Association of America, Washington, DC. https://paa.confex.com/paa/2016/meetingapp.cgi/Paper/6724

- Masquelier, B., J. Eaton, P. Gerland, F. Pelletier (2015). *Age patterns and sex ratios of adult mortality in countries with high HIV prevalence*. Paper presented at the *UAPS 7th African Population Conference* (Pretoria, South Africa). - http://uaps2015.princeton.edu/uploads/150248

- Gerland, P., Biddlecom, A., and Kantorová, V. (2015). *Fertility Decline Patterns and Scenarios of Future Fertility Change in Sub-Saharan Africa*. Paper presented at the US National Research Council Committee on Population Workshop on Recent Trends in Fertility in Sub-Saharan Africa. June 15-16, 2015, Washington, DC.
- Juran, S., and Gerland, P. (2015). *Mobilizing a Data Revolution for Sustainable Development*. Paper presented at the Annual Meeting of the Population Association of America, San Diego, CA. http://paa2015.princeton.edu/uploads/153811
- Gu, D., Gerland, P., and Pelletier, F. (2015). *Risks of Exposure and Vulnerability to Natural Disasters at the City Level: A Global Overview*. Paper presented at the Annual Meeting of the Population Association of America, San Diego, CA. http://paa2015.princeton.edu/uploads/151539
- Gu, D., Gerland, P., Andreev, K., Li, N., Spoorenberg, T., and Heilig, H. (2014). *Risks of Exposure of World's Cities to Natural Disasters*. Paper presented at the International Seminar on Demographic Differential Vulnerability to Natural Disasters in the Context of Climate Change Adaptation organised by the IUSSP Scientific Panel on Climate Change.
- Wheldon, M. C., Raftery, A. E., Clark, S. J., and Gerland, P. (2014). *Bayesian Reconstruction of Two-Sex Populations by Age: Estimating Sex Ratios at Birth and Sex Ratios of Mortality*. Paper presented at the Annual Meeting of the Population Association of America, Boston, MA. http://paa2014.princeton.edu/papers/140994
- Sevcikova, H., Raftery, A. R., and Gerland, P. (2013). *Bayesian probabilistic population projections: do it yourself.* Paper presented at the Joint Eurostat/UNECE Work Session on Demographic Projections, Rome, Italy. http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.11/2013/WP_13.2.pdf
- Gerland, P., T. Spoorenberg, J. Bravo, P. Lattes, C. Sawyer, V. Kantorova, M. S. Lai (2013). "Uses of Census Microdata by the United Nations Population Division". Paper presented at the KOSTAT pre-event to the *XXVII IUSSP International Population Conference* on "Using Census Micro-data for Demographic Research" (Aug 23-25, 2013), Busan, Republic of Korea.
- Li, N., and P. Gerland (2013). "Using census data to estimate old-age mortality for developing countries". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea. http://www.iussp.org/sites/default/files/event_call_for_papers/Li-Gerland_2013_IUSSP-Using%20census%20data%20to%20estimate%20old-age%20mortality%20for%20developing%20countries.pdf
- Gu, D., P. Gerland, K. Andreev, N. Li, T. Spoorenberg, G. Heilig (2013). "Growth Patterns of World's Cities Since 1950". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea. http://www.iussp.org/en/event/17/programme/paper/3200.
- Gu, D., P. Gerland, K. Andreev, N. Li, T. Spoorenberg, G. Heilig (2013). "Old Age Mortality in Eastern and South-Eastern Asia". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea. http://www.iussp.org/sites/default/files/event_call_for_papers/Gu%20et%20al2013_IUSSP_Old%20Age%20Mortality_Abstract.pdf
- Wheldon, M. C., A. E. Raftery, S. Clark, P. Gerland (2013). "Bayesian Reconstruction of Past Populations and Vital Rates by Age for Developing and Developed Countries". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea. http://www.iussp.org/sites/default/files/event_call_for_papers/BayesianReconstruction_IUSSP2013.pdf
- Alkema, L., A. E. Raftery, P. Gerland (2013). "Ultimate fertility levels: a modified projection method for low fertility countries". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea. http://www.iussp.org/sites/default/files/event_call_for_papers/Busan2013_TFasymptote.pdf
- Spoorenberg, T., P. Gerland (2013). "Fertility Transition Across Asia". Paper presented at the *XXVII IUSSP International Population Conference*, Busan, Republic of Korea.
- Gerland, P. (2013). "UN Population Division's Methodology in Preparing Base Population for Projections: case study for India". Paper presented at the *JYP Comparative Asia Research Centre, NUS Global Asia Institute Conference on "40 per cent of the world: population change, human capital and development in China, India and Indonesia"* – 22-24 May 2013, Singapore.
- Gu, D., P. Gerland, K. Andreev, N. Li, T. Spoorenberg, and G.K. Heilig (2013). "Global Distribution and Risks of Exposures of World's Cities to Natural Hazards, Air Pollution and Climate Change". Paper presented at the *Annual Meeting of the Population Association of America* – 11-13 April 2013, New Orleans, LA. http://paa2013.princeton.edu/papers/130456
- Gu, D., P. Gerland, K. Andreev, N. Li, T. Spoorenberg, and G.K. Heilig (2013). "Old Age Mortality in Eastern and South-Eastern Asia". Paper presented at the *Annual Meeting of the Population Association of America* – 11-13 April 2013, New Orleans, LA. http://paa2013.princeton.edu/abstracts/130455
- Wheldon, M. C., A. E. Raftery, S.J. Clark, and P. Gerland (2013). Bayesian Reconstruction of Past Populations and Vital Rates by Age for Developing and Developed Countries. Paper presented at the *Annual Meeting of the Population Association of America* – 11-13 April 2013, New Orleans, LA.

http://paa2013.princeton.edu/papers/130303

- Raftery, A.E., N. Lalic, and P. Gerland (2012). "Joint Probabilistic Projection of Female and Male Life Expectancy". Paper presented at the *Annual Meeting of the Population Association of America*, - 3-5 May 2012, San Francisco, CA. - http://paa2012.princeton.edu/download.aspx?submissionId=120140

- Wheldon, M.C., A.E. Raftery, S.J. Clark, and P. Gerland (2012). "Reconstructing Population Dynamics of the Recent Past, with Uncertainty, from Fragmentary Data" - Paper presented at the *Annual Meeting of the Population Association of America*, - 3-5 May 2012, San Francisco, CA. – http://paa2012.princeton.edu/download.aspx?submissionId=120146

- Ye, L., P. Gerland, T. Spoorenberg, K. Vladimira, and K. Andreev (2011). "Graduation methods to derive age-specific fertility rates from abridged data: a comparison of 10 methods using HFD data." Paper presented at the *First Human Fertility Database Symposium*. Rostock, Germany. http://www.humanfertility.org/Docs/Symposium/Liu-Gerland%20et%20al.pdf

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- Gerland, P., J. Kaphuka, G. Mandere, H. Misiri, P. Fleming (2007). "Adult Mortality Estimations from Cohort and Census/Survey data: a comparison of direct and indirect methods in rural Malawi". Paper presented at the *UAPS 5th African Population Conference* (Arusha, Tanzania). - http://uaps2007.princeton.edu/download.aspx?submissionId=70706

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- Weinreb, A., P. Gerland, and P. Fleming (2006). "HIV prevalence and orphan household distribution in a rural Malawi district" - Paper presented at the *2006 Annual Meeting of the Population Association of America*, Los Angeles.

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REPORTS AND WORKING PAPERS

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- Dionne, K.Y., P. Gerland, S. Watkins (2010). "AIDS Exceptionalism: The View From Below". Univ. of California, Los Angeles - California Center for Population Research Working Paper (PWP-CCPR-2009-046) - http://papers.ccpr.ucla.edu/download.php?paper=PWP-CCPR-2009-046

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- Alkema, L., A.E. Raftery, P. Gerland, S.J. Clark, F. Pelletier, T. Buettner (2010). "Probabilistic Projections of the Total Fertility Rate for All Countries". Working Paper no. 97. Center for Statistics and the Social Sciences. University of Washington. January 28, 2010 - http://www.csss.washington.edu/Papers/wp97.pdf

- Raftery, A.E., L. Buettner, P. Gerland, S.J. Clark, F. Pelletier, T. Buettner, G.K. Heilig, N. Li, H. Sevcikova (2009). "White Paper: Probabilistic Projections of the Total Fertility Rate for All Countries for the 2010 World Population Prospects". UN/POP/EGM-FERT/2009/16. Paper presented at the *Expert Group Meeting on Recent and Future Trends in Fertility*. New York, 2-4 December 2009 held by the United Nations, Department of Economic and Social Affairs, Population Division. - http://www.un.org/esa/population/meetings/EGM-Fertility2009/P16_Raftery.pdf

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CONFERENCE POSTERS AND PRESENTATIONS

- Wheldon, M., V. Kantorova, J. Molitoris, P. Gerland (2024). "Identifying Stalls in Fertility Declines Using a Probabilistic Approach". Poster presented at the *Annual Meeting of the Population Association of America*, Columbus, OH.

- Liu, D., P. Gerland, et al. (2024). "Conditional Probabilistic Projections of Fertility Given Policy Intervention Scenarios". Poster presented at the *Annual Meeting of the Population Association of America*, Columbus, OH. https://events.rdmobile.com/Lists/Details/2277001

- Andreev, K., D. Gu, and P. Gerland (2013). "Patterns of Mortality Improvement by Level of Life Expectancy at Birth". Poster presented at the *Annual Meeting of the Population Association of America*, New Orleans, LA. http://paa2013.princeton.edu/papers/132554

- Alkema, L., A. Raftery, and P. Gerland (2013). "Ultimate Fertility Levels: A Modified Projection Method for Low Fertility Countries". Poster presented at the *Annual Meeting of the Population Association of America*, New Orleans, LA. http://paa2013.princeton.edu/papers/130805

- Alkema, L., J.L. Chunn, P. Gerland, D. Gu, and G.K. Heilig (2012). "Bayesian Population Projections for Every City in the World." Poster presented in *Annual Meeting of the Population Association of America*. San Francisco, CA: Population Association of America. http://paa2012.princeton.edu/download.aspx?submissionId=121511

- Gu, D., P. Gerland, K.F. Andreev, N. Li, T. Spoorenberg, C.S. Yamarthy, and G.K. Heilig (2012). "Patterns of Growth and Distributions of World's Cities: 1950-2025." Poster presented in *Annual Meeting of the Population Association of America*. San Francisco, CA: Population Association of America. - http://paa2012.princeton.edu/download.aspx?submissionId=122165
- Alkema, L., P. Gerland, and T. Buettner (2011). "Probabilistic Projections of Urbanization for All Countries." Poster presented in *Annual Meeting of the Population Association of America*. Washington, DC: Population Association of America. - http://paa2011.princeton.edu/download.aspx?submissionId=110768
- Chunn, J.L., A.E. Raftery, P. Gerland (2009). "Bayesian Probabilistic Projections of Mortality". – Poster presented at the *Population Association of America 2009 Annual Meeting*. Detroit, MI – 30 April – 2 May 2009. - http://paa2009.princeton.edu/download.aspx?submissionId=90851
- Dionne, K.Y., P. Gerland, and S. Watkins (2009). "AIDS Exceptionalism: The View From Below". Poster presented at the *Population Association of America 2009 Annual Meeting*. Detroit, MI – 30 April – 2 May 2009. - http://paa2009.princeton.edu/download.aspx?submissionId=91912
- Gerland, P. (2008). "Incorporating changing Urban-Rural population ratio in EPP (June 2006) using WUP 2007 Revision". Presentation at the meeting of the *UNAIDS/WHO Reference Group on Estimates, Modelling and Projection*. Imperial College, London, U.K. (28-29 Feb 2008).
- Gerland, P. and S. Watkins (2007) – "Daily Conversation Logs and Diaries in Rural Malawi: New Insights about Topics and Patterns of Social Interactions in Ethnographic Journals 1999-2005" - Poster presented at *the 2007 Annual Meeting of the Population Association of America*, New York and *International Sunbelt Social Network Conference* (INSNA – Sunbelt XXVII) – Corfu.
- Gerland, P. (2005). "From Divergence to Convergence in Sex Differentials in Adult Mortality in Developed Countries" – Poster presented at the *2005 Annual Meeting of the Population Association of America*, Philadelphia (http://paa2005.princeton.edu/download.aspx?submissionId=50501) and at the *2005 International Union for the Scientific Study of Population*, Tours (http://iussp2005.princeton.edu/download.aspx?submissionId=52475).

ACDEMIC LECTURES – SEMINARS

"World Population Prospects 2024: estimation challenges and analytical strategies to reconstruct demographic levels and trends since 1950 for 237 countries/areas"

- *Population Studies Group (PSG) seminar*, London School of Hygiene & Tropical Medicine (11 June 2024)

"World Population Prospects 2022: estimation challenges and analytical strategies to reconstruct demographic levels and trends since 1950 for 237 countries/areas"

- *Population Studies Center: Colloquium Series*, University of Pennsylvania (23 Jan. 2023)
- *Les Séminaires du Département de Démographie*, Université de Montréal (9 Dec. 2022)

"What's Beneath the Future: World Population Prospects "

- *SEMAINE DATA-SHS 2023*, Plateforme Universitaire de Données d'Aix-Marseille Universitaire (PUD-AMU) (12 Dec. 2023)

"World Population Prospects: 1950-2020 estimates and 2020-2100 projections"

- *Demographic Methods Class Talk*, Dept. Sociology, Ohio State University (19 Oct. 2021)

"Trends in Demography: Population dynamics and major sources of demographic data"

- *SAVE-QES Summer Institute*, Dalla Lana School of Public Health, Univ. of Toronto, Toronto, Canada (27 June 2018)
- *2nd Annual Global Health and Mortality Summer Institute*. Dalla Lana School of Public Health, Univ. of Toronto, Toronto, Canada (27 May 2019)

"UN population projections: new methods and models"

- *Introduction to Demographic Methods*, Department of Global Health and Population, Harvard School of Public Health, Harvard University, Boston, MA (Nov. 17, 2014)

"Probabilistic Projections of the Total Fertility Rate for All Countries: an introduction to the new 2010 UN fertility projection model" - http://esa.un.org/unpd/wpp/Documentation/pdf/Gerland-Alkema_2011_ALAP-Rio_TFR-projection-model.pdf

"Lessons learned and applications of the 2010 UN fertility projection methodology" - http://esa.un.org/unpd/wpp/Documentation/pdf/Gerland_2011_ALAP-Rio_Application-UN-projection-model.pdf

- *International seminar on Population Estimates and Projections: methodologies, innovations and estimation of target population applied to public policies* (Session 1: Innovations in the Population Projections at the UN Population Division: Methods, advances and challenges) organized by the Latin American Population Association (ALAP) - Research Network on Population Estimates and Projections, and the National School of Statistics (ENCE) of the Brazilian Institute of Geography and Statistics (IBGE), Rio de Janeiro (Brazil), 9 -11 November 2011).

"Issues, challenges and findings in reconstructing mortality patterns by age and sex for five South-Asian countries since 1950: India, Bangladesh, Pakistan, Sri Lanka and Maldives" - http://esa.un.org/unpd/wpp/ppt/Gerland/Gerland_20110916_CGHR.pdf

- Center for Global Health Research, Li Ka Shing Knowledge Institute, St. Michael's Hospital (Toronto, ON, Canada). CGHR seminar (September 16, 2011)

"Issues, models and assumptions in projecting 230 countries/areas: insights from the UN World Population Prospects"

- Princeton University. Office of Population Research (Princeton, NJ). ECO 572/SOC 532 - Research Methods in Demography (April 21, 2010)
- University of Washington. Center for Statistics and the Social Sciences (Seattle, WA). PPgp Seminar (May 21, 2009)
- Harvard School of Public Health. Department of Global Health and Population (Boston, MA). Intro to Demo Methods (Dec. 8, 2008)

 "International forensic population estimations: challenges and analytical strategies to reconstruct national demographic trends and levels since 1950 for 230 countries/areas"

- CUNY Graduate Center (New York, NY). CUNY Institute for Demographic Research (CIDR). 2010-11 seminar in Health, Labor and Demography series (February 19th, 2010)
- University of Washington. Center for Studies in Demography and Ecology (Seattle, WA). CSDE Seminar (May 22, 2009)
- Harvard School of Public Health, Dept of Global Health and Population (Boston, MA). Seminar - (Dec. 8, 2008)

"Estimation of robust demographic time-series with noisy data for developing countries: selected cases studies from Africa and Asia"

- University of Washington. Center for Statistics and the Social Sciences (Seattle, WA). CSSS Seminar (May 20, 2009)

PH.D. DISSERTATION COMMITTEE MEMBER

- 2012-2016: Andrea Verhulst, F.R.S.-F.N.R.S. Research Fellow and PhD Student, Research Centre in Population and Societies, SSH/IACS, Collège Jacques Leclercq, Louvain-la-Neuve (Belgium)

EXTERNAL EXAMINER

- MA theses in Actuarial Science from the University of Cape Town (South Africa): Magadzire (2010) "Testing the Orphanhood Method against Benchmark Mortality Rates in South Africa Since 1996", Machemedze (2011) "Levels of mortality of the South African aged population using the method of extinct generations", Richman (2017) "Old age mortality in South Africa, 1985-2011"
- Ph.D. thesis in Demography from the University of Cape Town (South Africa): Nannan (2017). "Measuring child mortality in resource limited settings using alternative approaches: South African case study"
- 2016, 2017, 2018 and 2019 graduate courses on Population projections and modelling from the University of Cape Town (South Africa).

UN INTERNSHIP SUPERVISION

- 2025: Pfundstein, Julius (MS in Digital Humanities, Leipzig, Germany) on a systematic literature review and compilation of estimates of forced migrations, mass expulsion and deportation of labor migrants worldwide since the 1950s ; Yan, An (MS in Statistics, Shanghai Univ., China) on data mining of PDF files for the metadata questionnaires from the UN Demographic Yearbook ; Schubert, Henrik-Alexander (Ph.D. in demography at the Max Planck Institute for Demographic Research and the University of Oxford, UK) and Lu, Qianyi (PhD in Sociology, Univ. of Illinois at Urbana-Champaign) on the evaluation of completeness of birth and death registrations from CRVS, and the modelling of robust annual time series for all countries since 1950.

- 2024-202: Huang, Yuqian (MA in Sociology, Shanghai Univ., China), Zhang, Mengying (MS in urban data science and analytics, Univ. of Leeds, UK), Cheng, Dong (MA in Sociology, Shanghai Univ., China), Yang, Yinglei (MA in Sociology, Shanghai Univ., China), Liu, Junchi (MA in Sociology, Shanghai Univ., China) on the preparation of the national set of 1950-2024 annual estimates (and projections up to 2050) for the 237 countries and areas of the *World Urbanization Prospects 2025* (compilation of urban definitions, and preparation of national time series of percentage urban based on national definitions).

- 2024 – Chen, Zirui (MS in Enterprise Risk Management, Columbia University, NY): contributed to the preparation of the *World Population Prospects 2024: Summary of Results* report and data visualization, and assisted with the servicing of the Commission on Population and Development and several other intergovernmental meetings and Rogers, Kate (MS in public health in biostatistics, Yale Univ., CT) on the evaluation and harmonization of international data on the distribution of the population by city class size for all countries since 1950.

- 2018 - Chen, Mijia (MA in Quantitative Methods in the Social Sciences, Columbia University, NY): compilation and analysis of metadata on official population estimates, population censuses and vital registration (including official assessment of registration completeness based on reporting to the UN Demographic Yearbook) and De Oliveira Carnevali, Rafaella (PhD in Demography, Universidade Federal de Minas Gerais, Brazil): methodological evaluation and comparison of age heaping indices with systematic and comprehensive application to all population censuses of the world since 1950.

- 2017 – Ng, Carmen (PhD in Demography, University of Pennsylvania, PA) on analysis of vital registration data for infant and child mortality, Kai Zhong (MS in Statistics, University of Minnesota-Twin Cities, Minneapolis, MN) on graduation of mortality age pattern, statistical modelling of old-age mortality and record linkage programming in R, and Yijiao Liu (Ph.D. in Economics, Stony Brook University, NY) on analysis of full birth history data from DHS microdata

- 2016-2017 - Gune Mindra, Florence (MPH International Health Sciences University, Kampala, Uganda) and Dakshayani Rajabhathor (BS in Health Informatics, Stony Brook University): drafting of report for an UN expert group meeting on "Methodology and lessons learned to evaluate the completeness and quality of CRVS data", coding of open-ended answers and review of statistical metadata, and the compilation and coding of mortality information for a systematic and comprehensive meta-analysis of census questions for all countries of the world since 1950, and the measurement of maternal mortality through census questions; statistical programming in R for record linkages, data visualization of child mortality data and conflict deaths from international databases for UN interagency group on child mortality

- 2012 – Thillard, Julien (Master in Demography, Institut de Demographie de l'Universite de Paris I-Pantheon-Sorbonne, France): Modeling international net migration flows - Experience and lessons learned applying Joel Cohen's gravity model to net migration flow matrices by origin-destination

- 2011 – Ye, Liu (Master in Statistics, Colombia University, NY). Comparison of 10 graduation methods to derive age-specific fertility rates from abridged data using the Human Fertility Database

- 2010 – Cunningham, Kevin (Master degree in applied statistics, Oxford University and Ph.D. student in political science, Trinity College Dublin, Ireland): Forecasting foreign-born age profiles using the Box-Cox Power Exponential Model

- 2010 – Lee, Jeeyeon (Master in Quantitative Methods and Modeling, Baruch college, City University of New York, NY): review and analysis of national population policies and meta-analysis of post-enumeration surveys

- 2009 – Ortega, Ruth Ludmilla (Master on Information Sciences, Journalism, from the University Complutense of Madrid, Spain, and doctoral research in International Relations in the Department of Sociology at Harvard University): meta-analysis and preparation of a research dataset on major events with potentially significant national demographic impacts since the 1950s (e.g., independence, major political changes, major natural disasters, major conflicts or crises, famines, etc.)

- 2009 – Li, Qing (Master in Financial Engineering, Stevens Institute of Technology, NJ): research on model life tables and 2/4 parameters relational logit transformation models

- 2008 – Zuo, Jiaming (Master in Mathematics, Shanghai Jiaotong University, PRC) benchmarking of three state-of-

the art transformation methods from abridged to complete life table

- 2007 – Qi, Wu (Ph.D candidate in Statistics, University of South Carolina, USA): robust statistical modeling of time series of demographic rates by age and sex incorporating experts' opinion

TRAINING WORKSHOPS

- 2024 (9–13 December):Islamabad (Pakistan) - Conduct a training workshop on national and subnational probabilistic population projections with 21 professionals from the Pakistan Bureau of Statistics, Pakistan's National Institute of Population Studies, the four provincial bureaux of statistics, and the Sustainable Development Policy Institute.
- 2014 (4-7 November): Montevideo (Uruguay) - Conduct a training workshop on probabilistic population projections with 15 professionals from government entities involved in the preparation of projections of population ageing and its fiscal/budgetary implications.
- 2013 (21-27 July): Kabul (Afghanistan) - provision of technical assistance to the Central Statistical Office (CSO) of Afghanistan and conducted a training workshop for 15 Afghan professionals on population estimates and projections for the Afghan CSO.
- 1987-1998: Conduct, organization and participation as co-lecturer in 25 training workshops sponsored by United Nations agencies in Asia and Africa (English and French-speaking countries), and ISPC/US Bureau of Census for 350 statisticians, demographers, administrators and decision-makers on microcomputer technology and software use and applications related to population activities (i.e. census and survey data entry and data processing, demographic estimations and projections, statistical databases and geographical information systems).

SCIENTIFIC PANELS AND PUBLIC SERVICE

- Chair of the 2015-2018 IUSSP Scientific Panel on Innovations for Strengthening Civil Registration and Vital Statistical Systems - http://iussp.org/en/panel/innovations-strengthening-civil-registration-and-vital-statistical-systems
- Vice-Chair of the Scientific Council of the French Institute for Demographic Studies (also called Institut National d'Etudes Demographiques, INED) in 2018-2022, and 2023-2027
- Member of the Scientific advisory committee of the DemoStAf project (Demography Statistics for Africa - https://demostaf.site.ined.fr/en/) in 2015-2018
- Member of the IPUMS International Advisory Board in 2016-2023
- Member of the Consultative Group Meeting on the Performance Monitoring and Accountability 2020 (PMA2020) JHU project in 2016-2018
- Member of the Scientific Advisory Board to the Vaccine Impact Modelling Consortium, Department of Infectious Disease Epidemiology, Imperial College London (http://www.vaccineimpact.org/) since 2017

REVIEWER FOR ACADEMIC JOURNALS

- African Population Studies (since 2010)
- Asian Population Studies (since 2011)
- Asia-Pacific Population Journal (since 2016)
- Annals of Applied Statistics (since 2015)
- Bulletin of the World Health Organization (since 2009)
- Canadian Studies in Population (since 2017)
- Demographic Research (since 2009)
- Demography (since 2010)
- Economic Letters (since 2013)
- INSEE - Économie et Statistique (since 2014)
- eLife (since 2012)
- European Journal of Population (since 2009)

- Genus (since 2018)
- Global Health Action (since 2013)
- Global health, epidemiology and genomics (2017)
- International Journal of Epidemiology (since 2008)
- International Journal of Environmental Research and Public Health (since 2014)
- Journal of Official Statistics (since 2015)
- Lancet (since 2014)
- Nature Behavior (since 2017)
- Nature Climate (since 2017)
- PLoS Medecine (since 2013)
- PLoS One (since 2011)
- PNAS (since 2017)
- Population (since 2013)
- Population Health Metrics (since 2016)
- Population Research and Policy Review (since 2009)
- Population Studies (since 2012)
- Science (since 2011)
- Scientific Data (since 2016)
- Scientific Reports (since 2016)
- Social Networks (since 2011)
- Sexually Transmitted Infections (since 2012)

REVIEWER FOR SCIENTIFIC PROPOSALS

- European Research Council (ERC)

LANGUAGES

- French – native language
- English – speak fluently and read/write with high proficiency
- Spanish – read

MEMBERSHIPS

- Population Association of America (PAA)
- International Union for the Scientific Study of Population (IUSSP)
- Union for African Population Studies (UAPS)