Curriculum Vitae – **Fengqing Chao** Nov 2021

Contact

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Education

2017 PhD in Biostatistics, Saw Swee Hock School of Public Health, National University of Singapore (NUS).

- Dissertation: Bayesian Methods for Estimating Global Health Indicators. handle:10635/137381.
- Advisors: A/P Leontine Alkema (UMass, Amherst), A/P Alex Cook (NUS).

2012 BSc (Hons) Statistics, National University of Singapore.

Research interests

Statistical demography; Bayesian modeling; Global health; Sex ratio at birth; Child mortality; Time series analysis

Research grant

Sep 2019–Sep 2022: Long Term Agreement for Services (LTAS) for the UNICEF. LTAS-42107038. PI: **Fengqing Chao** (Awarded to KAUST with faculty mentor Hernando Ombao). USD $35,300.

Peer-reviewed publications

11. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. "Global estimation and scenario-based projections of sex ratio at birth and missing female births using a Bayesian hierarchical time series mixture model." *Annals of Applied Statistics* 15, no. 3 (2021): 1499-1528. [Link]

10. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, Christophe Z. Guilmoto, and Leontine Alkema. "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, no. 8 (2021): e005516. [Link]
Media coverage: 1News.az, aufeminin, BioEdge, Breibart (mention 1, mention 2), Business Insider Australia, Business Insider Netherlands, Daily Greek Show, Der Spiegel, detektor.fm, Diario da Amazonia, Eastern Eye, France 24, Futurism, Gazeta Do Povo, Green Me, Insider, Jordan Times, Medical News Today, Medical Xpress, Medindia, Mic, Mirage News, MSN (mention 1, mention 2) Naked Science, News Medical, NuevoPeriodico, Popmech, PressReleasePoint, Real Clear Science, RET, RT Network (mention 1, mention 2), Sputnik News (mention 1, mention 2), Science Alert, SciencePost, Scientias, Tek Deeps, The Journal (Ireland), The Manomet Current, The Spectator, True Viral News (mention 1, mention 2), WND, ZAP.

9. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. "Sex ratio at birth in Vietnam among six subnational regions during 1980–2050, estimation and probabilistic projection using a Bayesian hierarchical time series model with 2.9 million birth records." *PLoS ONE* 16, no. 7 (2021): e0253721. [Link]

8. **Chao, Fengqing**, Christophe Z. Guilmoto, Samir K.C., and Hernando Ombao. "Probabilistic projection of the sex ratio at birth and missing female births by State and Union Territory in India." *PLoS ONE* 15, no. 8 (2020): e0236673. [Link]
Media coverage: 2051.FR, AbortionRight, BCNN1, Bioethics.com, Christian Headlines, Christian Post, Deccan Herald, Druzina, EurekAlert!, Forbes, Guardian, il Post, India Times, Justdial, Medical Xpress,

Medindia, mumsnet, News Break, NewScientist, Online News, ORF, Reddit, Rep, Research Matters, ScienceDaily, SPUC, Telegraph, WMC.

7. Guilmoto, Christophe Z., **Fengqing Chao**, and Purushottam M. Kulkarni. "On the estimation of female births missing due to prenatal sex selection." *Population Studies* 74, no. 2 (2020): 283-289. [Link]
6. Brown, Peter, **RELISH Consortium**, Yaoqi Zhou. "Large expert-curated database for benchmarking document similarity detection in biomedical literature search." *Database* 2019 (2019): 1-66. [Link]
5. **Chao, Fengqing**, and Ajit Kumar Yadav. "Levels and trends in the sex ratio at birth and missing female births for 29 states and union territories in India 1990–2016: A Bayesian modeling study." *Foundations of Data Science* 1, no. 2 (2019): 177-196. [Link]
   Media coverage: Research Matters.
4. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. "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, no. 19 (2019): 9303-9311. [Link]
   Media coverage: 7thSpace, BBC, Brights - Die Natur des Zweifels, Channel3000, CNN, Deutsches Ärzteblatt, EurekAlert!, Focus.it, Madame Figaro, Medium US, N+1, News-Medical.Net, NewScientist, Panorama, Phys.org, RT Network (mention 1, mention 2), Science Alert, Science World Report, Sputnik News, Spektrum, TekCrispy, Wired, ZAP.
3. **Chao, Fengqing**, Danzhen You, Jon Pedersen, Lucia Hug, and Leontine Alkema. "National and regional under-5 mortality rate by economic status for low-income and middle-income countries: a systematic assessment." *The Lancet Global Health* 6, no. 5 (2018): e535-e547. [Link]
   Media coverage: Business Standard, Bloomberg-Quint, vaccines and global health :: ethics and policy.
2. **Chao, Fengqing**, and Leontine Alkema. "How informative are vital registration data for estimating maternal mortality? A Bayesian analysis of WHO adjustment data and parameters." *Statistics and Public Policy* 1, no. 1 (2014): 6-18. [Link]
1. Alkema, Leontine, **Fengqing Chao**, Danzhen You, Jon Pedersen, and Cheryl C. Sawyer. "National, regional, and global sex ratios of infant, child, and under-5 mortality and identification of countries with outlying ratios: a systematic assessment." *The Lancet Global Health* 2, no. 9 (2014): e521-e530. [Link]
   Media coverage: Economic Times, Print, Wire.

Book

1. Christopher, Gee, Yvonne Arivalagan, and **Fengqing Chao**, eds. *Singapore Perspectives 2018: Together*. World Scientific, 2018. doi:10.1142/11155

Manuscripts under Peer-Review/Revision

2. **Chao, Fengqing**, Muhammad Asif Wazir, and Hernando Ombao. "Levels and trends in sex ratio at birth in provinces of Pakistan from 1980 to 2020 with scenario-based missing female birth projections to 2050: a Bayesian modeling approach". *SocArXiv* (2021). doi:10.31235/osf.io/5n3y8.
1. **Chao, Fengqing**, Samir K.C., and Hernando Ombao. "Levels and trends in the sex ratio at birth in seven provinces of Nepal between 1980 and 2016 with probabilistic projections to 2050: a Bayesian modeling approach". *arXiv preprint arXiv:2007.00437* (2020).

Manuscripts in preparation

1. **Chao, Fengqing**, Danzhen You, Lucia Hug, Jon Pedersen, Hernando Ombao, and Leontine Alkema. "A systematic assessment of national under-5 mortality rate by place of residence for 109 countries". doi:10.6084/m9.figshare.12403088.

Honors and Awards

Aug 2013: XXVII IUSSP International Population Conference Best Poster Award.

May 2011: NUS Dean's List: AY 2010/2011 Semester 2.

2008–2012: NUS Undergraduate Scholarship (full scholarship).

Professional membership

2020–: American Statistical Association. International Biometric Society.

2021: UN Expert Group Meeting, Supporting Inequality Assessments of CRVS systems in Asia and the Pacific. Statistics Division, UN ESCAP.

Professional activities

Associate Editor:
2019–: Foundation of Data Science (AIMS).

Ad hoc reviewer:
Statistics journals: Annals of Applied Statistics. Risks. TEST.

Demography journals: Demographic Research. International Perspectives on Sexual and Reproductive Health. Journal of Population and Social Studies. Mathematical Population Studies. Population Research and Policy Review. Spatial Demography. SSM - Population Health. Studies in Family Planning.

Global/public health journals: BMC Public Health. BMJ Global Health. Global Health Research and Policy. International Health. International Journal of Environmental Research and Public Health. Lancet Global Health.

Interdisciplinary journals: BMJ Open. Cogent Economics and Finance. Cogent Social Sciences. Journal of Development Effectiveness. Medical Principles and Practice. Social Sciences. Sustainability. Violence Against Women.

Work Experience

Jul 2021–: Research Scientist; Statistics Program, CEMSE Division, KAUST.

Jul 2019–Jul 2021: Postdoctoral Fellow; Statistics Program, CEMSE Division, KAUST.

Jan 2019–Jul 2019: Research Fellow; Institute of Policy Studies, LKY School of Public Policy, NUS.

Dec 2017–Dec 2018: Postdoctoral Fellow; Institute of Policy Studies, LKY School of Public Policy, NUS.

Aug 2017–Nov 2017: Research Assistant; Institute of Policy Studies, LKY School of Public Policy, NUS.

Aug 2015–Jul 2017: Research Assistant; SSH School of Public Health, NUS.

Apr 2016: Visiting Scholar; Department of Biostatistics and Epidemiology, UMass, Amherst, USA.

May 2015–Jul 2015: Consultant; Division of Data, Research and Policy, UNICEF headquarters, NYC, USA.

May 2013–Aug 2015: Research Assistant; Department of Statistics & Applied Probability, NUS.

Jul 2012–Apr 2013: Research Assistant; SSH School of Public Health, NUS.

Teaching Experience

Nov 2021: Guest instructor. STAT 230: Linear Models. KAUST.

- Topics covered: Generalized additive models.

Nov 2021: Guest instructor. STAT 215: Applied Statistics with R. KAUST.

- Topics covered: Bayesian inference.

Dec 2020: Guest instructor. Likelihood function for a Bernoulli distribution. Yale-NUS.

Fall 2012: Teaching assistant. CO5103: Quantitative Epidemiological Methods. SSH School of Public Health, NUS.

Invited presentations at scholarly meetings/workshops

35. Aug 9th, 2021: "Sex-specific estimates 5–24", UN Inter-agency Group for Child Mortality Estimation (UN IGME) Meeting. (virtual meeting)
34. Aug 8th, 2021: "Sex Ratio of Mortality Rate Estimation Using a Bayesian Modeling Approach", Joint Statistical Meeting. (virtual meeting; Slides doi:10.6084/m9.figshare.15133995)
33. Jul 7th, 2021: "Estimate sex ratio of mortality for age group 15–24 with a Bayesian model", Bayes WG UMass Amherst Seminar, UMass Amherst, USA. (virtual meeting)
32. Mar 29th, 2021: "Sex ratio of mortality estimation in age group 15–24, a Bayesian modeling approach", Biostatistics Group Seminar, KAUST, Thuwal, Saudi Arabia. (virtual meeting)
31. Mar 16th, 2021: "Sex Ratio at Birth by Vietnamese Region Estimation and Projection, a Bayesian modeling approach", ENAR Spring Meeting. (virtual meeting; Slides doi:10.6084/m9.figshare.14223101)
30. Mar 8th, 2021: "Experience with Bayesian hierarchical model for age-specific fertility rate estimation", United Nations Expert Group Meeting for measuring completeness and coverage for low capacity countries, UN ESCAP, Bangkok, Thailand. (virtual meeting)
29. Dec 14th, 2020: "Estimating and Projecting Disparities in Pre- and Post-natal Survival using Bayesian Methods", Mathematical, Computational & Statistical Sciences Seminar, Yale-NUS College, Singapore. (virtual meeting; Slides doi:10.6084/m9.figshare.14013542)
28. Aug 10th, 2020: "Scenario-Based Bayesian Probabilistic Projections of the Sex Ratio at Birth and Missing Female Births", Biostatistics Group Seminar, KAUST, Thuwal, Saudi Arabia. (virtual meeting)
27. Aug 4th, 2020: "Scenario-Based Bayesian Probabilistic Projections of the Sex Ratio at Birth and Missing Female Births for All Countries and Country-Level Imbalances", Joint Statistical Meeting (virtual meeting; Slides doi:10.6084/m9.figshare.12764102)
26. May 3rd, 2020: "Bayesian Methods for Estimating Global Health Indicators", Biostatistics Group Seminar, KAUST, Thuwal, Saudi Arabia. (virtual meeting)
25. Apr 23rd, 2020: "A Systematic Assessment of National Under-5 Mortality Rate by Place of Residence for 109 Countries", Annual Meeting, Population Association of America, Washington, DC, USA. (virtual meeting; Paper doi:10.6084/m9.figshare.12403088, Slides doi:10.6084/m9.figshare.12403931)
24. Apr 6th, 2020: "Lessons learned from the B3 development and application to model time trends in differentials", United Nations Expert Group Meeting for the World Population Prospects 2021 and Beyond, UNPD, New York City, NY, USA. (virtual meeting; Slides doi:10.6084/m9.figshare.12403901)
23. Jan 21st, 2020: "Probabilistic Projection of the Sex Ratio at Birth by States and Union Territories in India", Statistics department seminar, University of Massachusetts, Amherst, USA.
22. Jan 15th, 2020: "Under-five mortality estimation by residence", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, Tarrytown, USA.
21. Jan 14th, 2020: "Methods to generate mortality beyond age 14 by sex", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, Tarrytown, USA.

20. Dec 20th, 2019: "A Systematic Assessment of National Under-5 Mortality Rate by Place of Residence for 109 Countries", Professional Update, Saw Swee Hock School of Public Health, National University of Singapore, Singapore.
19. Sep 30th, 2019: "Under-5 Mortality Rate Estimation by Place of Residence", Biostatistics Group Seminar, KAUST, Thuwal, Saudi Arabia.
18. Nov 6th, 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", ISI Young Statisticians Regional Workshop – Session 1, 2018 Statistics Week Taiwan, Taipei, Taiwan.
17. Oct 31st, 2018: "Research sharing – SRB estimation and Projection & Estimating Under-5 Mortality Rate by Household Economic Status", ADRI Department Seminar, Shanghai University, Shanghai, China.
16. Sep 17th, 2018: "Estimate Under-5 Mortality Rate by Residence", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, New York City, NY, USA.
15. Jul 26th, 2018: "Decomposing the impact of increased educational attainment on demographic dividend in Singapore, 1970–2010", 12th Global Meeting of the NTA Network, Mexico City, Mexico.
14. Jul 24th, 2018: "Contribution of in-migration to the first demographic dividend in Singapore, 1970–2010", 12th Global Meeting of the NTA Network, Mexico City, Mexico.
13. May 17th, 2018: "Estimating Under-5 Mortality Rate by Household Economic Status", Professional Update, Saw Swee Hock School of Public Health, National University of Singapore, Singapore. (Slides doi:10.6084/m9.figshare.12403868)
12. May 10th, 2018: "Singapore perspective 2018 survey: an in-depth analysis", Department Research Seminar, Institute of Policy Studies, LKY School of Public Policy, National University of Singapore, Singapore.
11. Apr 26th, 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", Annual Meeting, Population Association of America, Denver, CO, USA. (Paper doi:10.6084/m9.figshare.12403061, Slides doi: 10.6084/m9.figshare.12403532)
10. May 1st, 2017: "Estimate Under-5 Mortality Rate by Household Economic Status", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, New York City, NY, USA.
9. Apr 24th, 2017: "Estimate Under-5 Mortality Rate by Household Economic Status", Biomedical Science, Engineering and Computing Group joint seminar, Oak Ridge National Lab, Knoxville, USA.
8. Apr 13th, 2017: "Estimate Under-5 Mortality Rate by Household Economic Status", Statistics department seminar, University of Massachusetts, Amherst, USA.
7. Oct 18th, 2016: "A systematic assessment of national, and regional under-five mortality by wealth quintiles and identification of countries with outlying levels using a Bayesian hierarchical time series model", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, New York City, NY, USA.
6. Sep 30th, 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", 2nd Singapore International Public Health Conference and 11th Singapore Public Health & Occupational Medicine Conference, Singapore.
5. Apr 22nd, 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", Statistics Working Group, University of Massachusetts Amherst, USA.
4. Mar 31st, 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", Annual Meeting, Population Association of America, Washington, DC, USA. (Paper doi:10.6084/m9.figshare.12401654, Slides doi: 10.6084/m9.figshare.12403457)
3. Jul 29th, 2015: "A Systematic Assessment of National, Regional and Global Levels and Trends in the Sex Ratio at Birth and Identification of Countries with Outlying Levels", Third International Conference of Asian Population Association, Kuala Lumpur, Malaysia.

2. Dec 18th, 2014: "Sex Ratio at Birth", UN Inter-Agency Group on Mortality Estimation Technical Advisory Group Meeting, New York City, NY, USA.

1. Aug 30th, 2013: "Sex Differences in U5MR: Estimation and identification of countries with outlying levels or trends", XXVII IUSSP International Population Conference, Busan, Korea. (Paper doi: 10.6084/m9.figshare.12401468)

Poster Presentations

7. May 7th, 2021: "Estimation and projection of sex ratio at birth for Vietnam regions, using a Bayesian hierarchical time series model". Annual Meeting, Population Association of America. (virtual meeting; Poster doi:10.6084/m9.figshare.14551413)

6. May 6th, 2021: "Under-5 Mortality Rate Estimation by Residence for 112 Countries using a Bayesian Time Series Model". Annual Meeting, Population Association of America. (virtual meeting; Poster doi:10.6084/m9.figshare.14551371)

5. Apr 23rd, 2020: "Probabilistic Projection of the Sex Ratio at Birth and Missing Female Births by States and Union Territories in India", Annual Meeting, Population Association of America, Washington, DC, USA. (virtual meeting; Poster doi:10.6084/m9.figshare.12401462)

4. Nov 20th, 2019: "A Systematic Assessment of National Under-5 Mortality Rate by Place of Residence for 109 Countries using a Bayesian Time Series Model", Statistics and Data Science Workshop, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia. (Poster doi:10.6084/m9.figshare.12401381)

3. Apr 27th, 2017: "A Systematic Assessment of National, and Regional Under-Five Mortality Rate By Wealth Quintiles and Identification of Countries with Outlying Levels Using a Bayesian Hierarchical Time Series Model", Annual Meeting, Population Association of America, Chicago, USA.
(Paper doi:10.6084/m9.figshare.12403028, Poster doi:10.6084/m9.figshare.12401297)

2. Jun 13th, 2016: "Sex Rate at Birth: Estimation and Projection using Bayesian Hierarchical Time Series Model", World Meeting of International Society for Bayesian Analysis, Sardinia, Italy.
(Poster doi:10.6084/m9.figshare.12401288)

1. Aug 27th, 2013: "How informative are vital registration data for estimating maternal mortality? A Bayesian analysis of WHO adjustment data and parameters", XXVII IUSSP International Population Conference, Busan, Korea. (Paper doi:10.6084/m9.figshare.12401495, Poster doi:10.6084/m9.figshare.12400973)

Miscellaneous Research Items

Datasets

10. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, Christophe Z. Guilmoto, and Leontine Alkema. 2021. "National, regional and global sex ratio at birth scenario-based projections from 2021 to 2100". *figshare*. doi:10.6084/m9.figshare.15097992.

9. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, Christophe Z. Guilmoto, and Leontine Alkema. 2021. "National, regional and global sex ratio at birth estimates from 1950 to 2020". *figshare*. doi:10.6084/m9.figshare.15097965.

8. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, Christophe Z. Guilmoto, and Leontine Alkema. 2021. "SRB Database for All Countries 2021 Version". *figshare*. doi:10.6084/m9.figshare.14838396.

7. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. 2021. "Sex Ratio at Birth Projections by Vietnam Region from 2021 to 2050". *figshare*. doi:10.6084/m9.figshare.14724696.

6. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. 2021. "Vietnam Regional SRB Estimates from 1980 to 2020". *figshare*. doi:10.6084/m9.figshare.14724678.

5. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. 2021. "Vietnam Regional SRB Database". *figshare*. doi:10.6084/m9.figshare.14724636.

4. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 2019. "pnas.1812593116.sd04: National Annual Number of Missing Female Births (AMFB) Estimates and 95% Uncertainty Intervals for the 12 Countries with Strong Statistical Evidence of SRB Inflation, 1970–2017". *figshare*. doi:10.6084/m9.figshare.12764705.
3. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 2019. "pnas.1812593116.sd03: Global and Regional SRB Annual Estimates and 95% Uncertainty Intervals, 1950–2017". *figshare*. doi:10.6084/m9.figshare.12764561.
2. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 2019. "pnas.1812593116.sd02: National SRB Annual Estimates and 95% Uncertainty Intervals, 1950–2017". *figshare*. doi:10.6084/m9.figshare.12764438.
1. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 2019. "pnas.1812593116.sd01: SRB Database". *figshare*. doi:10.6084/m9.figshare.12764249.

Technical Reports

9. **Chao, Fengqing**, Muhammad Asif Wazir, and Hernando Ombao. 2021. "Web appendix for levels and trends in sex ratio at birth in provinces of Pakistan from 1980 to 2020 with scenario-based missing female birth projections to 2050: a Bayesian modeling approach". *figshare*. doi:10.6084/m9.figshare.16917622.
8. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. 2021. "S1 Appendix Sex ratio at birth in Vietnam among six subnational regions during 1990–2050, estimation and probabilistic projection using a Bayesian hierarchical time series model". *figshare*. doi:10.6084/m9.figshare.14152979.
7. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, Christophe Z. Guilmoto, and Leontine Alkema. 2021. "Web Appendix Projecting sex imbalances at birth at global, regional, and national levels from 2018 to 2100: scenario-based Bayesian probabilistic projections of the sex ratio at birth and missing female births". *figshare*. doi:10.6084/m9.figshare.14101583.
6. **Chao, Fengqing**, Christophe Z. Guilmoto, Samir K.C., and Hernando Ombao. 2020. "S1 Appendix Probabilistic projection of the sex ratio at birth and missing female births by State and Union Territory in India". *figshare*. doi:10.6084/m9.figshare.12672821.
5. **Chao, Fengqing**, Samir K.C., and Hernando Ombao. 2020. "Technical Appendix Levels and trends in the sex ratio at birth in seven provinces of Nepal between 1980 and 2016 with probabilistic projections to 2050: a Bayesian modeling approach". *figshare*. doi:10.6084/m9.figshare.12593651.
4. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 2019. "Web Appendix Systematic Assessment of the Sex Ratio at Birth for All Countries and Estimation of National Imbalances and Regional Reference Levels". *figshare*. doi:10.6084/m9.figshare.12442373.
3. Gee, Christopher, Yvonne Arivalagan, and **Fengqing Chao**. *Singapore Perspectives 2018 Conference Background Paper.* Institute of Policy Studies, LKY School of Public Policy, NUS (2018). (PDF available).
2. **Chao, Fengqing**, Danzhen You, Jon Pedersen, Lucia Hug, and Leontine Alkema. 2018. "Web Appendix National and Regional Under-5 Mortality Rate by Economic Status for Low-income and Middle-income Countries: A Systematic Assessment". *figshare*. doi:10.6084/m9.figshare.12442244.
1. Alkema, Leontine, **Fengqing Chao**, Danzhen You, Jon Pedersen, and Cheryl Chriss Sawyer. 2014. "Supplementary Appendix: National, Regional, and Global Sex Ratios of Infant, Child, and Under-5 Mortality and Identification of Countries with Outlying Ratios: A Systematic Assessment". *figshare*. doi:10.6084/m9.figshare.12442175.

Conference Papers

7. **Chao, Fengqing**, Danzhen You, Lucia Hug, Jon Pedersen, Hernando Ombao, and Leontine Alkema. 2020. "A Systematic Assessment of National Under-5 Mortality Rate by Place of Residence for 109 Countries". *figshare*. doi:10.6084/m9.figshare.12403088.
6. **Chao, Fengqing**, Patrick Gerland, Alex R. Cook, and Leontine Alkema. 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". *figshare*. doi:10.6084/m9.figshare.12403061.

5. **Chao, Fengqing**, Danzhen You, Jon Pedersen, and Leontine Alkema. 2017. "A Systematic Assessment of National, and Regional Under-five Mortality Rate by Wealth Quintiles and Identification of Countries with Outlying Levels Using a Bayesian Hierarchical Time Series Model". *figshare*. doi:10.6084/m9.figshare.12403028.
4. **Chao, Fengqing**, Leontine Alkema, and Patrick 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". *figshare*. doi:10.6084/m9.figshare.12401654.
3. Alkema, Leontine, **Fengqing Chao**, and Cheryl C. Sawyer. 2014. "Gender Differences in Infant and Child Mortality: Estimation of Sex-specific Mortality and an Assessment of Excess Female Deaths". *figshare*. doi:10.6084/m9.figshare.12401627.
2. **Chao, Fengqing**, and Leontine Alkema. 2013. "How Informative Are Vital Registration Data for Estimating Maternal Mortality? A Bayesian Analysis of WHO Adjustment Data and Parameters". *figshare*. doi:10.6084/m9.figshare.12401495.
1. Alkema, Leontine, **Fengqing Chao**, and Cheryl C. Sawyer. 2013. "Gender Differences in Infant and Child Mortality: Estimation and Identification of Countries with Outlying Levels or Trends". *figshare*. doi:10.6084/m9.figshare.12401468.

Conference Posters

8. **Chao, Fengqing**, Muhammad Asif Wazir, and Hernando Ombao. 2021. "Sex ratio at birth estimation and projection for Pakistan provinces, a Bayesian modeling approach". *figshare*. doi:10.6084/m9.figshare.14551428.
7. **Chao, Fengqing**, Christophe Z. Guilmoto, and Hernando Ombao. 2021. "Estimation and projection of sex ratio at birth for Vietnam regions, using a Bayesian hierarchical time series model". *figshare*. doi:10.6084/m9.figshare.14551413.
6. **Chao, Fengqing**, Danzhen You, Lucia Hug, Jon Pedersen, Hernando Ombao, and Leontine Alkema. 2021. "Under-5 Mortality Rate Estimation by Residence for 112 Countries using a Bayesian Time Series Model". *figshare*. doi:10.6084/m9.figshare.14551371.
5. **Chao, Fengqing**, Christophe Z. Guilmoto, Samir K.C., and Hernando Ombao. 2020. "Probabilistic Projection of the Sex Ratio at Birth and Missing Female Births by State and Union Territory in India (poster for PAA 2020)". *figshare*. doi:10.6084/m9.figshare.12401462.
4. **Chao, Fengqing**, Danzhen You, Lucia Hug, Jon Pedersen, Hernando Ombao, and Leontine Alkema. 2019. "Under-5 Mortality Rate Estimation by Residence Using Bayesian Model (poster for SDSW 2019)". *figshare*. doi:10.6084/m9.figshare.12401381.
3. **Chao, Fengqing**, Danzhen You, Jon Pedersen, Lucia Hug, and Leontine Alkema. 2017. "Estimation of Under-5 Mortality by Wealth Quintile (poster for PAA 2017)". *figshare*. doi:10.6084/m9.figshare.12401297.
2. **Chao, Fengqing**, Leontine Alkema, and Patrick Gerland. 2016. "Sex Ratio at Birth: Estimation and Projection Using Bayesian Hierarchical Time Series Model (poster for ISBA 2016)". *figshare*. doi:10.6084/m9.figshare.12401288.
1. **Chao, Fengqing**, and Leontine Alkema. 2013. "How Informative Are Vital Registration Data for Estimating Maternal Mortality? A Bayesian Analysis of WHO Adjustment Data and Parameters (poster for IUSSP 2013)". *figshare*. doi:10.6084/m9.figshare.12400973

Conference Slides

9. **Chao, Fengqing**. 2021. "Sex Ratio of Mortality Rate Estimation Using a Bayesian Modeling Approach". *figshare*. doi:10.6084/m9.figshare.15133995.
8. **Chao, Fengqing**. 2021. "Sex Ratio at Birth by Vietnamese Region Estimation and Projection, a Bayesian modeling approach". *figshare*. doi:10.6084/m9.figshare.14223101.
7. **Chao, Fengqing**. 2020. "Estimating and Projecting Disparities in Pre- and Post-natal Survival using Bayesian Methods". *figshare*. doi:10.6084/m9.figshare.14013542.
6. **Chao, Fengqing**. 2020. "Scenario-Based Bayesian Probabilistic Projections of the Sex Ratio at Birth and Missing Female Births (JSM 2020)". *figshare*. doi:10.6084/m9.figshare.12764102.

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