Curriculum Vitae – **Fengqing Chao** Apr 2020

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.
- Advisors: A/P Leontine Alkema (UMass, Amherst), A/P Alex Cook (NUS)

2012 BSc (Hons) majoring in Statistics. National University of Singapore

Research interests

Statistical demography; Global health; Bayesian modeling; Time series analysis

Professional activities

Associate Editor for: Foundation of Data Science (AIMS).

Reviewed for: The Lancet Global Health. Annals of Applied Statistics. Demographic Research. BMJ Global Health. Journal of Development Effectiveness. Global Health Research and Policy. BMC Public Health.

Research grant

Sep 2019–Sep 2021: Long Term Agreement for Services (LTAS) for the UNICEF. PI: **Chao, F.** LTAS-42107038. (Awarded to KAUST with faculty mentor Ombao H.)

Peer-reviewed publications

6. Guilmoto, C.Z., **Chao, F.**, & Kulkarni, P.M. (forthcoming). On the estimation of female births missing due to prenatal sex selection. *Population Studies*.
5. **Chao, F.**, & Yadav, A. K. (2019). 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*(2), 177-196.
4. **Chao, F.**, Gerland, P., Cook, A. R., & Alkema, L. (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, 166*(19), 9303-9311.
3. **Chao, F.**, You, D., Pedersen, J., Hug, L., & Alkema, L. (2018). 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*(5), e535-e547.
2. Alkema, L., **Chao, F.**, You, D., Pedersen, J., & Sawyer, C. C. (2014). 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*(9), e521-e530.
1. **Chao, F.**, & Alkema, L. (2014). How informative are vital registration data for estimating maternal mortality? A Bayesian analysis of WHO adjustment data and parameters. *Statistics and Public Policy, 1*(1), 6-18.

Preprints

1. **Chao, F.**, Guilmoto, C.Z., K.C. S, Ombao, H. (2020). Probabilistic Projection of the Sex Ratio at Birth and Missing Female Births by States and Union Territories in India. *arXiv preprint arXiv:2004.02228.*

Manuscripts in preparation

2. **Chao, F.**, et al., "A Systematic Assessment of National under-5 Mortality Rate by Place of Residence for 109 Countries".
1. **Chao, F.**, et al., "Scenario-based Bayesian probabilistic projections of the sex ratio at birth and missing female births for all countries and country-level imbalances". Under review.

Collaborators

Alkema, Leontine	Department of Biostatistics and Epidemiology, University of Massachusetts, Amherst, USA
Cook, Alex	Saw Swee Hock School of Public Health, National University of Singapore, SG
Gerland, Patrick	United Nations (UN) Population Division, Department of Economic and Social Affairs, USA
Hernando Ombao	Biostatistics Research Group, Statistics Program, CEMSE, KAUST, Thuwal, Saudi Arabia
Hug, Lucia	Division of Data, Research, and Policy, United Nations Children's Fund (UNICEF), New York, USA
Guilmoto, Christophe Z	CEPED/IRD, Université de Paris, Paris, France
KC, Samir	Asian Demographic Research Institute, Shanghai University, Shanghai, China
Pedersen, Jon	FAFO Institute of Applied International Studies, NOR
Sawyer, Cheryl	UN Population Division, Department of Economic and Social Affairs, USA
You, Danzhen	Division of Data, Research, and Policy, UNICEF, New York, USA

Honors and Awards

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

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

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

Work Experience

Jul 2019– Postdoctoral Fellow; Biostatistics Research Group, Computer, Electrical and Mathematical Sciences and Engineering Division, King Abdullah University of Science and Technology

Jan 2019–Jul 2019 Research Fellow; Institute of Policy Studies, Lee Kuan Yew School of Public Policy, National University of Singapore

Dec 2017–Dec 2018 Postdoctoral Fellow; Institute of Policy Studies, Lee Kuan Yew School of Public Policy, National University of Singapore

Aug 2017–Nov 2017 Research Assistant; Institute of Policy Studies, Lee Kuan Yew School of Public Policy, National University of Singapore

Aug 2015–Jul 2017 Research Assistant; Saw Swee Hock School of Public Health, National University of Singapore

Apr 2016 Visiting Scholar; Department of Biostatistics and Epidemiology, University of Massachusetts, Amherst, USA

May 2015–Jul 2015 Consultant; Data and Analytics Section, Division of Data, Research and Policy, UNICEF headquarters, New York, USA

May 2013–Aug 2015 Research Assistant; Department of Statistics & Applied Probability, National University of Singapore

Jul 2012–Apr 2013 Research Assistant; Saw Swee Hock School of Public Health, National University of Singapore

Teaching Experience

Fall 2012 teaching assistant; Quantitative Epidemiological Methods (CO5103), Saw Swee Hock School of Public Health, National University of Singapore

Invited presentations at scholarly meetings/workshops

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)
24. Apr 6th, 2020: "Lessons learned from the B3 development and application to model time trends in differentials", United Nations virtual Expert Group Meeting for the World Population Prospects 2021 and Beyond, UNPD, New York, USA. (virtual meeting)

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, 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.
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.
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, 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, 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.
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, 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.

Poster Presentations

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)
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.
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.
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.
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.