Crew Attic, The King's Buildings
Edinburgh EH9 3FF, UK
feiyao-edinburgh.github.io

Fei Yao

(44) 7422585853
fei.yao@ed.ac.uk
github.com/FeiYao-Edinburgh

Education

- **Sep 2018 – Aug 2021 (Expected)** PhD in Atmospheric and Environmental Sciences (Supervisor: Prof. Paul Palmer), School of GeoSciences, The University of Edinburgh
- **Aug 2015 – Jul 2018** MSc in Geography: Urban and Regional Planning (Supervisor: Prof. Jiansheng Wu), School of Urban Planning and Design, Peking University
- **Sep 2011 – Jul 2015** BSc in Geographical Information System (Supervisor: Prof. Xuepei Han), School of Geography, East China Normal University

Peer-reviewed articles

7. Wu, J.S., Liang, J.T., Zhou, L.G., **Yao, F.**, Peng, J., 2019. Impacts of AOD Correction and Spatial Scale on the Correlation between High-Resolution AOD from Gaofen-1 Satellite and In Situ $PM_{2.5}$ Measurements in Shenzhen City, China. *Remote Sensing*. 11(19), 2223. doi: 10.3390/rs11192223.
6. **Yao, F.**, Wu, J.S., Li, W.F., Peng, J., 2019. Estimating Daily $PM_{2.5}$ Concentrations in Beijing Using 750-m VIIRS IP AOD Retrievals and a Nested Spatiotemporal Statistical Model. *Remote Sensing*. 11(7), 841. doi: 10.3390/rs11070841.
5. **Yao, F.**, Wu, J.S., Li, W.F., Peng, J., 2019. A spatially structured adaptive two-stage model for retrieving ground-level $PM_{2.5}$ concentrations from VIIRS AOD in China. *ISPRS Journal of Photogrammetry and Remote Sensing*. 151: 263-276. doi: 10.1016/j.isprsjprs.2019.03.011.
4. **Yao, F.**, Si, M.L., Li, W.F., Wu, J.S., 2018. A multidimensional comparison between MODIS and VIIRS AOD in estimating ground-level $PM_{2.5}$ concentrations over a heavily polluted region in China. *Science of The Total Environment*. 618: 819-828. doi: 10.1016/j.scitotenv.2017.08.209.
3. Wang, Z., **Yao, F.**, Li, W.F., Wu, J.S., 2017. Saturation Correction for Nighttime Lights Data Based on the Relative NDVI. *Remote Sensing*. 9(7): 759. doi: 10.3390/rs9070759.
2. Wu, J.S, **Yao, F.**, Li, W.F., Si, M.L., 2016. VIIRS-based remote sensing estimation of ground-level $PM_{2.5}$ concentrations in Beijing-Tianjin-Hebei: A spatiotemporal statistical model. *Remote Sensing of Environment*. 184: 316-328. doi: 10.1016/j.rse.2016.07.015.
1. **Yao, F.**, Ye, K., Zhou, J.H., 2015. Automatic image classification and retrieval by analyzing plant leaf features. *Journal of Zhejiang A & F University*. 32(3): 426-433. doi: 10.11833/j.issn.2095-0756.2015.03.015. (In Chinese)

Conference presentations

3. The 9th International GEOS-Chem Meeting, hosted by Harvard University, Cambridge, US, 6-9 May, 2019. Poster title: *$PM_{2.5}$ over China inferred from MAIAC AOD and GEOS-Chem: preliminary results.*
2. The 3rd regular meeting of the NCEO ATM-BIO group, hosted by Rutherford Appleton Laboratory (RAL), Oxford, UK, 1-2 November, 2018. Presentation title: *$PM_{2.5}$ over China during 2000-2018 inferred from MAIAC AOD: my PhD project description.*
1. The 10th International Association for China Planning (IACP) Conference, organized by IACP and Peking University, Beijing, China, 30 June - 3 July, 2016. Presentation title: *Remote sensing estimation of ground-level $PM_{2.5}$ concentrations in Beijing-Tianjin-Hebei: A spatiotemporal statistical model.*

Research Experiences (Selected)

6. Estimating ground-level $PM_{2.5}$ concentrations in Beijing-Tianjin-Hebei based on multi-source remote sensing data. ¥12000, *The Presidential Foundation of Peking University Shenzhen Graduate School* (No. 201607). Jan 2017 – Jun 2017.
   Principal Investigator: **Yao, F.**, Co-Investigator: Si, M.L., et al.
5. Estimation of ground-level $PM_{2.5}$ concentrations and corresponding health effects in Beijing-Tianjin-Hebei based on a spatiotemporal statistical model. ¥10000, *The Presidential Foundation of Peking University Shenzhen Graduate School* (No. 2015017). Jan 2016 – Jun 2016.
   Principal Investigator: **Yao, F.**, Co-Investigator: Si, M.L., et al.
4. Automatic image classification and retrieval by analyzing plant leaf features. ¥8000, *The National Innovation and Entrepreneurship Training Program for College Students* (No. 201410269099). Oct 2014 – Jun 2015.
   Principal Investigator: **Yao, F.**, Co-Investigator: Yan, Y.Z., Cai, Z.B.
3. Remote Sensing Monitoring of $PM_{2.5}$ Concentrations and Socio-economic Driving Forces in Beijing-Tianjin-Hebei Based on VIIRS Data. ¥950000, *The National Natural Science Foundation of China* (No. 41471370). Jan 2015 – Dec 2018.
   Principal Investigator: Li, W.F., Co-Investigator: Qi, Z.X., et al (inc **Yao, F.**).

2. Spatial equity analysis of urban green space from the perspective of balance between supply and demand: A case study of Futian District, Shenzhen, China. ¥10000, *The Presidential Foundation of Peking University Shenzhen Graduate School* (No. 2015022). Jan 2016 – Jun 2016.
   Principal Investigator: Si, M.L., Co-Investigator: **Yao, F.**, Shen, N.
1. Characteristics of spatiotemporal distribution of $PM_{2.5}$ concentrations and its correlation with meteorological conditions: A case study of Shanghai, China in 2013. ¥8000, *The National Innovation and Entrepreneurship Training Program for College Students* (No. 201410269093). Oct 2014 – Jun 2015.
   Principal Investigator: Chen, J., Co-Investigator: **Yao, F.**, Zheng, X.Y.

Honors & Awards (Selected)

5. China Scholarships Council (CSC)/University of Edinburgh Scholarships, awarded by CSC, Jun 2018.
4. National Scholarship, awarded by Ministry of Education of the People's Republic of China in 2013, 2016, and 2017.
3. Academic Innovative Award, honored by Peking University in 2016 and 2017.
2. Best Student Paper Award, awarded by the International Association for China Planning in its annual conference in Beijing, Jul 2016.
1. Shanghai Excellent Graduates, honored by Shanghai Municipal Education Commission, Jun 2015.

Services & Activities

- Demonstrator for *Visual Analytics* (Spring 2019), *Welcome Week Computing Induction* (Autumn 2019).
- Reviewer for Academic Journals: *Remote Sensing of Environment* (2017-), *Environmental Science & Technology* (2017-), *Aerosol and Air Quality Research* (2018-), ISPRS Journal of Photogrammetry and Remote Sensing (2019-).

Skills

Programming

- Proficient: Python, Shell
- Intermediate: Fortran, MATLAB, R, C
- Basic: Perl, IDL, C#, Stata

Models

- Proficient: Panel Data Regression Models, Geographically Weighted Regression Models
- Intermediate: GEOS-Chem