

Hao Wu | Data Scientist

Argus Media

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Education

- Ph.D.* **University of Edinburgh, UK** *2017*
- Understanding the spatial-temporal variability of urban air pollution
 - Dispersion and statistical modelling of urban air pollution
 - Conducting air quality measurements using stationary and portable air quality monitors.
- BSc (1st Class)* **University of Edinburgh, UK** *2013*
- Environmental and Sustainable Chemistry
- BSc* **South China University of Technology, China** *2013*
- Applied Chemistry

Employment

- Data Scientist* **Argus Media** *Jan 2022 - Present*
- Building Shiny dashboards for the Argus Probability Curves
- Senior Data Science Specialist* **Ricardo Energy & Environment** *Jan 2020 - Jan 2022*
- Dynamic reporting, data visualisation and building tools for analysing air quality data
 - Building R Shiny applications integrated with SQL database for data checking and ratification
 - Building bespoke R packages to simplify the process of data analysis
 - Using regression and tree based statistical models to predict air quality trends
 - Building Python CLI tool to scrape and compare data from XML files
 - Mentoring staff on doing data analysis in R
- Data Science Specialist* **Ricardo Energy & Environment** *Apr 2017 - Jan 2020*

Techinal Skills

Programming Languages.....

Proficient: R.

Intermediate: MySQL.

Basic: CSS, HTML, Bash, Python.

Software.....

Advanced: RStudio, ADMS-Urban, MS Word.

Intermediate: PyCharm, ArcGIS, FME, MS Excel, Sketchup, Fusion 360.

Honours and Awards

2016: Reviewer of Environmental Pollution Journal.

2013 - 2016: Edinburgh Global Research Scholarship.

2013: Undergraduate Research Project Prize.

Conferences and Training Courses

2018: Advanced Shiny Training course RStudio. San Diego, USA

2016: Oral presentation at International Society of Exposure Science. Utrecht, Netherlands

2016: Oral presentation at Annual UK Review Meeting on Outdoor and Indoor Air Pollution Research. Solihull, UK

2014, 2015: Poster presentation at Annual UK Review Meeting on Outdoor and Indoor Air Pollution Research. Solihull, UK

2015: FME Desktop Introductory and Advanced Training. Edinburgh, UK

2014: ACCENT Plus Summer School on Drivers, Feedbacks and Impacts in Air Quality and Climate Change. Urbino, Italy

2014: ADMS-Urban and EMIT Trainings. Cambridge, UK

Publications

1. Lin, C., Masey, N., Wu, H., Jackson, M., Carruthers, D. J., Reis, S., Doherty, R. M., Beverland, I., & Heal, M. R. (2017). Practical field calibration of portable monitors for mobile measurements of multiple air pollutants. *Atmosphere*, 8(12). <https://doi.org/10.3390/atmos8120231>
2. Kenagy, H. S., Lin, C., Wu, H., & Heal, M. R. (2016). Greater nitrogen dioxide concentrations at child versus adult breathing heights close to urban main road kerb-side. *Air Quality, Atmosphere & Health*, 9(6), 589–595. <https://doi.org/10.1007/s11869-015-0370-3>
3. Wu, H., Reis, S., Lin, C., & Heal, M. R. (2017). Effect of monitoring network design on land use regression models for estimating residential NO₂ concentration. *Atmospheric Environment*, 149, 24–33. <https://doi.org/10.1016/j.atmosenv.2016.11.014>
4. Wu, H., Reis, S., Lin, C., Beverland, I. J., & Heal, M. R. (2015). Identifying drivers for the intra-urban spatial variability of airborne particulate matter components and their interrelationships. *Atmospheric Environment*, 112, 306–316. <https://doi.org/10.1016/j.atmosenv.2015.04.059>
5. Steinle, S., Reis, S., Sabel, C. E., Semple, S., Twigg, M. M., Braban, C. F., Leeson, S. R., Heal, M. R., Harrison, D., Lin, C., & Wu, H. (2015). Personal exposure monitoring of PM_{2.5} in indoor and outdoor microenvironments. *Science of The Total Environment*, 508, 383–394. <https://doi.org/10.1016/j.scitotenv.2014.12.003>