

CURRICULUM VITAE FOR DR GIULIA ZAZZERI

ETH, Zürich, Switzerland

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EMPLOYMENT

- 05/2022 onwards** **Marie Skłodowska-Curie Postdoctoral Fellow**
Physics Department, ETH (Zürich)
Project Supervisor: Dr Lukas Wacker
- 10/2016-04/2022** **Research Associate in Atmospheric Trace Gas Measurements**
Physics Department, Imperial College London (ICL)
Research Advisor: Dr Heather Graven **Collaborator:** Dr Xiaomei Xu
- 06/2016- 09/2016** **Trainee in Air Quality and Greenhouse Gases Research**
Joint Research Centre, Ispra, Italy
Research Advisors: Dr Peter Bergamaschi, Dr Greet Janssens-Maenhout
- 10/2014-5/2016** **Greenhouse Gases Analyst**
Earth Science Department, Royal Holloway University of London (RHUL)
Research Advisors: Prof Euan Nisbet, Dr Dave Lowry, Dr Rebecca Fisher
- 6/2010-7/2011** **Research Fellow in Environmental Monitoring**
Department of Chemical Engineering, Industrial, Chemistry and Materials' Science of Pisa University, in collaboration with the spin-off company of University of Pisa TEA Sistemi S.p.a.
Research Advisors: Prof Paolo Andreussi, Dr Silvia Giamberini

EDUCATION

- 09/2011-10/2015** **Ph.D. in Atmospheric Science**, Earth Science Department, Royal Holloway University of London, Egham
Thesis Title: "Methane Emissions in the UK: Deciphering Regional Sources with Mobile Measurements and Isotopic Characterisation"
- 09/2007-06/2009** **MA, Environmental Science and Technology (Final Grade: 110/110 with Honours)**, Mathematical and Natural Sciences, University of Pisa, Italy
- 09/2004-06/2007** **BA, Environmental Science and Technology (Final Grade: 110/110 with honours)**, Mathematical and Natural Sciences, University of Pisa, Italy
Internship, Environmental Protection Regional Agency (ARPAT), Italy

ACADEMIC AWARDS

- Marie Skłodowska-Curie Individual Fellowship (2021)
- Best Presentation at the Geochemistry Group of the Mineralogical Society and Geological Society "Research in Progress" Meeting (2014)
- Travel Bursary from the Geochemistry Group of the Mineralogical Society and Geological Society (2014)

TEACHING EXPERIENCE

- Physics laboratory, 1st year Physics, ETH (2022-2023, 40h/academic semester)
- Supervision of 14 undergraduate and 4 master students (2017-2020)
- Invited lecturer at the Methane Isotope Workshop held at the Royal Holloway University of London (2018)
- Lectures on Carbon Cycles to postgraduate students, Physics, ICL (2017-2020, 6h/year)
- Spectroscopy laboratory, Physics, ICL (2017-2019, 48h/year)
- Undergraduate mathematics tutor. Geology BSc, RHUL (2012-2015, 64hr/year)

EVIDENCE OF ESTEEM

- Reviewer for Journals: *Atmospheric Environment*, *Atmosphere*, *Environmental Science and Technology*, *Science of the Total Environment*
- Postdoc Representative at Imperial College (2019-2020)
- Co-convener of the session 'Rising methane and climate: Identification, estimation, and reduction of anthropogenic and natural methane sources and sinks from the Arctic to the Tropics' at EGU 2017 (Vienna)
- Presenter at the Imperial Fringe outreach event ('Air') (12/2017)
- Invited scientist at the Loncon3-the World Science Fiction Convection (2014)

LIST OF PUBLICATIONS

15. **Zazzeri G.**, Graven H., Xu X., Saboya E., Blyth L., Manning A.J., Chawner H., Wu D., Hammer S. **Radiocarbon Measurements Reveal Underestimated Fossil CH₄ and CO₂ Emissions in London.** Submitted to *Geophysics Research Letters*.

14. Saboya, E., **Zazzeri, G.**, Graven, H., Manning, A. J., & Englund Michel, S. (2022). **Continuous CH₄ and δ¹³CH₄ measurements in London demonstrate under-reported natural gas leakage.** *Atmospheric Chemistry and Physics*, 22(5), 3595-3613

13. Al-Shalan, A., Lowry, D., Fisher, R. E., Nisbet, E. G., **Zazzeri, G.**, Al-Sarawi, M., & France, J. L. France (2022). **Methane emissions in Kuwait: Plume identification, isotopic characterisation and inventory verification.** *Atmospheric Environment*, 268, 118763

12. **Zazzeri, G.**, Xu, X. and Graven, H. (2021). **Efficient sampling of atmospheric methane for radiocarbon analysis and quantification of fossil methane.** *Environmental Science and Technology*, 55 (13), 8535-8541

11. Nisbet, E. G, Fisher, R. E., Lowry, D., France, J. L., Allen, G., Bakkaloglu, S., Broderick, T. J., Cain M., Coleman, M., Fernandez, J., Forster, G., Griffiths, P. T, Iverach, C. P., Kelly, B. F. J., Manning, M. R., Nisbet-Jones, P. B. R., Pyle, J. A., Townsend-Small, A., al-Shalaan, A., Warwick, N. and **Zazzeri, G.** (2020). **Methane mitigation: methods to reduce emissions, on the path to the Paris Agreement.** *Reviews of Geophysics*. <https://doi.org/10.1029/2019RG000675>

10. Graven, H., Hocking, T., **Zazzeri, G.** (2019). **Detection of fossil and biogenic methane at regional scales using atmospheric radiocarbon.** *Earth's Future* 7 (3), 283-299

9. Xueref-Remy, I., **Zazzeri, G.**, Bréon, F.M., Vogel, F., Ciais, P., Lowry, D., Nisbet, E.G. (2019). **Anthropogenic methane plume detection from point sources in the Paris megacity area and characterization of their δ¹³C signature.** *Atmospheric Environment*, 117055

8. Lowry, D., Fisher, R. E., France, Coleman, M., Lanoisellé, M., **Zazzeri, G**, Nisbet, E. G., Shaw, J.T., Allen, G., Pitt, J., Ward, R.S. (2019). **Environmental baseline monitoring for shale gas development in the UK: identification and geochemical characterisation of local source emissions of methane to atmosphere.** *Science of The Total Environment*, 134600

7. **Zazzeri, G.**, E. Acuña Yeomans, H. D. Graven (2018). **Global and regional emissions of radiocarbon from nuclear power plants from 1972 to 2016.** *Radiocarbon*, 1-15

6. **Zazzeri, G.**, Lowry D., Fisher R.E., France J.L., Lanoisellé M., Grimmond C.S.B., Nisbet E.G. (2017). **Evaluating methane inventories by isotopic analysis in the London region.** *Scientific Reports* 7 (1), 4854

5. **Zazzeri, G.**, Lowry, D., Fisher, R.E., France, J.L., Lanoisellé, Kelly, B.F.J., M., Necki, J.M., Jasek, A., Day, S.J., Iverach, C.P., Ginty, E., Zimnoch, M. and Nisbet, E.G. (2016). **Carbon isotopic signature of coal-derived methane emissions to atmosphere: from coalification to alteration.** *Atmospheric Chemistry and Physics* 16 (21), 13669-13680

4. Röckmann T., Eyer S., Van der Veen C., Popa M.E., Tuzson B., Monteil G., Houweling S., Harris E., Brunner D., Fischer H., **Zazzeri G.**, Lowry D., Nisbet E.G., Brand W.A., Necki J.M., Emmenegger L., Mohn J. (2016). **In-situ observations of the isotopic composition of methane at the Cabauw tall tower site.** Atmospheric chemistry and physics 16 (16), 10469-10487
3. Lowry, D., Lanoisellé, M., Fisher, R.E., Martin, M., Fowler, C.M.R., France, J.L., Hernandez-Paniagua, I.Y., Novelli, P., Sriskantharajah, S., O'Brien, P., Rata, N.D., Holmes, C., Fleming, Z.L., Clemitshaw, K.C., **Zazzeri, G.**, Pommier, M., McLinden, C.A., and Nisbet, E.G. (2016). **Marked long-term decline in ambient CO mixing ratio in SE England, 1997-2014: evidence of policy success in improving air quality.** Scientific reports 6, 25661
2. **Zazzeri, G.**, Lowry, D., Fisher, R. E., France, J. L., Lanoisellé, M., & Nisbet, E. G. (2015). **Plume mapping and isotopic characterisation of anthropogenic methane sources.** Atmospheric Environment, 110, 151-162
1. Nisbet, E.G., Dlugokencky, E.J., Manning, M.R., Lowry, D., Fisher, R.E., France, J.L., Michel, J.B., Miller, S.E., White, J.W.C., Vaughn, B., Bousquet, P., Pyle, J.A., Warwick, N.J., Cain, M., Brownlow, R., **Zazzeri, G.**, Lanoisellé, M., Manning, A.C., Gloor, M., Worthy, D.E.J., Brunke, E.-G., Labuschagne, C., Wolff, E.W., Ganesan, A.L.(2015). **Rising atmospheric methane: 2007-14 growth and isotopic shift.** Global Biogeochemical Cycles 30 (9), 1356-1370