VALENTINA NOACCO
Water and Environment Engineering Research group
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Employment

Nov 2017-present **NERC Knowledge Exchange Fellow**, University of Bristol
Improving the understanding and consideration of uncertainty in the (re)insurance industry (collaboration with AXA XL, OASIS LMF, JBA Risk Management).

Apr-Oct 2017 **Research Associate: Applied Sensitivity**, University of Bristol
Advancing model development and validation in the (re)insurance industry using Global Sensitivity Analysis (collaboration with (re)insurance company XL Catlin). NERC-funded grant to Professor Thorsten Wagener.

Education

Dec 2012-Mar 2017 **PhD Civil Engineering**; University of Bristol
Investigating long-term drivers and controls on fluvial dissolved organic carbon and nitrate in the UK. NERC and University of Bristol doctoral studentship award.
Supervisors: Dr Nicholas Howden, Professor Thorsten Wagener.

2011-2012 **MSc Water and Environmental Management (distinction)**; University of Bristol
Thesis title: *Understanding the spatial heterogeneity of soil carbon on the North Wyke Farm Platform at Rothamsted Research.*

2006-2011 **BSc Environmental and Resources Engineering (100/110)**
Thesis title: *Sewage treatment, focusing on sewage sludge and its utilization in agriculture.*

Grants and awards

2017 Green Capital Change Maker Award

2016 Bristol University Alumni Travel Grant for EGU: £500

2015 British Hydrological Society (BHS) Travel Grant for AGU: £500

2015 Green Capital Change Maker Gold Award

2014 British Hydrological Society (BHS) Travel Grant for EGU: £650

2014 Best poster prize for 2nd year-PhD student at Natural Systems and Processes Poster Session, Bristol University

Other experience

Nov 2018 **Co-delivered** a departmental **tutorial** on the use of Global Sensitivity Analysis and the SAFE toolbox applied to a rainfall-runoff model (10 participants)

Aug 2018 **Delivered** a **tutorial** on the use of Global Sensitivity Analysis and the SAFE toolbox applied to an actuarial pricing model at **AXA XL** (~15 participants)

Conference presentations

Selected presentations include:

2018 **Models to Decisions** (Cambridge, UK) *Overcoming the "valley of death" – Transferring tools and expertise on sensitivity analysis to the (re)insurance sector*

2018 **European Geophysical Union General Assembly** (Vienna, Austria) *Overcoming the "valley of death" – Transferring tools and expertise on sensitivity analysis to the (re)insurance sector*

2017 **American Geophysical Union Fall Meeting** (New Orleans, US) *How can sensitivity analysis improve the robustness of mathematical models utilized by the re/insurance industry?*

2016 **European Geophysical Union General Assembly** (Vienna, Austria) *What drove Dissolved Organic Carbon (DOC) concentration variability in the River Thames (UK) between 1884 and 2014?*

2015 **American Geophysical Union Fall Meeting** (San Francisco, US) *How Population Growth and Land-Use Change Increased Fluvial Dissolved Organic Carbon Fluxes over 130 Years in the Thames Basin (UK).*

Publications

Noacco, V., Sarrazin, F., Pianosi, F. and Wagener, T. (2018), Matlab/R workflows to assess critical choices in Global Sensitivity Analysis using the SAFE toolbox, *MethodsX* (in review)

Noacco, V., T. Wagener, C. Duffy, and N. Howden (2018), Drivers of dissolved organic carbon (DOC) concentration variability in the River Thames between 1884 and 2013, *Hydrol. Process.* (under minor revision).

Noacco, V., Wagener, T., Howden, N.J.K., Understanding dominant controls on nitrate export through analysing a process-based model across three temperate catchments (in preparation).

Noacco, V., T. Wagener, F. Worrall, T. P. Burt, and N. J. K. Howden (2017), Human impact on long-term organic carbon export to rivers, *J. Geophys. Res. Biogeosciences*, *122*(4), 947–965, doi:10.1002/2016JG003614.

Harris, P., Howden, N.J.K., Peukert, S., **Noacco, V.**, Ramezani, K., Tuominen, E., Eludoyin, B., Brazier, R., Shepherd, A., Griffith, B., Orr, R., Murray, P., (2016), Contextualized Geographically Weighted Principal Components Analysis for Investigating Baseline Soils Data on the North Wyke Farm Platform, in *Geostatistical and Geospatial Approaches for the Characterization of Natural Resources in the Environment*, pp. 651–655, Springer International Publishing, Cham.doi:10.1007/978-3-319-18663-4_99

Shepherd, A., Harris, P., Griffith, B., **Noacco, V.**, Ramezani, K., Tuominen, E., Eludoyin, A., Hopkins, A., Collins, R.P., Fraser, M.D., others, (2014), Spatial soil variation on the North Wyke Farm Platform., in *EGF at 50: The future of European grasslands. Proceedings of the 25th General Meeting of the European Grassland Federation, Aberystwyth, Wales, 7-11 September 2014.*, pp. 239–241.

Outreach and public engagement

2016-2017 **Forest School**, volunteered and ran water-related sustainability projects for students years 3-6, Bannerman Road Community Academy, Bristol.

2013 **Inspire Summer School**, volunteered at summer school for 30 girls year 11 to encourage them to go into STEM, University of Bristol.