

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

Workshops and tutorials

- June 2019 **Co-delivered two workshops** on Global Sensitivity Analysis and the SAFE toolbox with applications to a flood model with JBA Risk Management and HindlesWorld Risk Solutions during the **OASIS Conference 2019** (~50 and 30 participants)
- Apr 2019 **Co-organised workshop** insurance sector – University of Bristol on strengthening resilience in the developing world

- Nov 2018-Feb 2019 **Co-delivered tutorials** on the use of Global Sensitivity Analysis and the SAFE toolbox applied to a rainfall-runoff model for research group at the University of Bristol and at the University of Southampton (~10 and 15 participants)
- Aug-Dec 2018 **Delivered two tutorials** on the use of Global Sensitivity Analysis and the SAFE toolbox applied to actuarial pricing model at **AXA XL** (~20 participants)

Selected presentations:

- 2019 **Bristol Actuarial Society** (Bristol, UK)
How can sensitivity analysis help the insurance industry make more robust decisions based on pricing models?
- 2019 **European Geophysical Union General Assembly** (Vienna, Austria)
Transferring expertise on Global Sensitivity Analysis to (re)insurance practitioners using workflows
- 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?*

Selected publications

Noacco, V., Sarrazin, F., Pianosi, F. and Wagener, T. (2019), 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 (2019), Drivers of dissolved organic carbon (DOC) concentration variability in the River Thames between 1884 and 2013, *Hydrol. Process.*

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.

Outreach, public engagement and EDI activities

- Feb 2019 Co-organised national gender equality workshop “[Quality through equality – tackling gender issues in hydrology](#)” at the University of Bristol.
- 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.