VALENTINA NOACCO
Water and Environment Engineering Research group
Department of Civil Engineering, University of Bristol, 93-95 Woodland Rd, Bristol, BS8 1US
valentina.noacco@bristol.ac.uk, safe-insurance.uk

Experience

Oct 2020-June 2021 **Maternity leave**

Nov 2017-Oct 2020 **NERC Knowledge Exchange Fellow**, University of Bristol
Improving the understanding and consideration of uncertainty in the (re)insurance industry (academic collaborators: Dr Francesca Pianosi, Professor Thorsten Wagener; industry partners: 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)**; University of Udine, Italy
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

Aug 2019-Oct 2019 **Delivered tutorials** on the use of Global Sensitivity Analysis and the SAFE toolbox at Willis Re, AON, AXA and Munich Re (~36 participants in total)

Jun 2019	**Co-delivered** two **workshops** on Global Sensitivity Analysis and the SAFE toolbox with applications to a flood model with JBA Risk Management and OASIS LMF 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 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:

2020	**European Geophysical Union General Assembly** (online) *Improving the robustness of flood catastrophe models in insurance through academia-industry collaboration* and Interactive Jupyter Notebooks for the visual analysis of critical choices in Global Sensitivity Analysis
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?*

Selected publications

Noacco V, Sarrazin F, Pianosi F, Wagener T. 2019. Matlab/R workflows to assess critical choices in Global Sensitivity Analysis using the SAFE toolbox. *MethodsX* **6**: 2258–2280 DOI: 10.1016/j.mex.2019.09.033

Noacco V, Duffy CJ, Wagener T, Worrall F, Fasiolo M, Howden NJK. 2018. Drivers of interannual and intra-annual variability of dissolved organic carbon concentration in the River Thames between 1884 and 2013. *Hydrological Processes* **33** (6): 994–1012 DOI: 10.1002/hyp.13379

Noacco V, Wagener T, Worrall F, Burt TP, Howden NJK. 2017. Human impact on long-term organic carbon export to rivers. *Journal of Geophysical Research: 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.