Richard Boothroyd

1. CONTACT

Address: Department of Geography and Planning, University of Liverpool, United Kingdom

Email: richard.boothroyd@liverpool.ac.uk

Website: https://www.liverpool.ac.uk/environmental-sciences/staff/richard-boothroyd/

2. CAREER HISTORY

2023- Lecturer in Physical Geography
Department of Geography and Planning, University of Liverpool

2022-23 Postdoctoral Research Associate
School of Geographical and Earth Sciences, University of Glasgow

2021-22 Postdoctoral Research Associate
School of Geography, Earth and Environmental Sciences, University of Birmingham

2019-21 Postdoctoral Research Associate
School of Geographical and Earth Sciences, University of Glasgow

2018-19 Lecturer in Physical Geography
School of Environment, Education and Development, University of Manchester

2017-18 Hydraulic Modeller
Mott MacDonald, Leeds

3. EDUCATION

2013-17 PhD “Flow-vegetation interactions at the plant-scale: the importance of volumetric canopy morphology on flow field dynamics”.
Department of Geography, Durham University, UK

2010-13 BSc (Hons) Physical Geography.
Department of Geography, Durham University, UK

4. PROFILE

I am a physical geographer with research interests at the interface of fluvial geomorphology, remote sensing and geomorphic hazards. I use emerging techniques to understand fluvial processes, with my current research using satellite imagery and big geospatial datasets to assess the risks that shifting rivers pose to people and infrastructure in dynamic landscapes. As a Lecturer in Physical Geography, I contribute teaching to several undergraduate and postgraduate modules, including fluvial environments and catchment hydrology. Previous postdoctoral research has allowed me to gain experience of collaborating on large projects (e.g., NERC EVOFLOOD) and international work (e.g., NERC UK-Philippines project on hydrometeorological hazards). Following my PhD, I worked for the engineering consultancy firm Mott MacDonald; this experience deepened my links with the professional geomorphology community.

5. SELECTED GRANTS AND FELLOWSHIPS

2023 “Biogeomorphic response of Po River tributaries to an extreme flood-drought sequence”. British Society for Geomorphology.

2022 “Satellite imagery to support flood risk modelling in large European rivers” [2021/43/O/ST10/00539] – PRELUDIUM BIS 3 under National Science Centre.

2021 “InfraRivChange - monitoring river migration at sites of critical bridge infrastructure in the Philippines”. Coalition for Disaster Resilient Infrastructure (CDRI) Fellowship.

2021 “MANGRO-ID: multi-hazard assessment of mangroves for resilience of coastal communities in Indonesia”. Researcher Links Climate Challenge Prize.

2020 European Cooperation in Science and Technology Short Term Scientific Visit. (Institute of Geophysics, Polish Academy of Sciences, Poland).

6. CAPACITY BUILDING AND TRAINING ACTIVITIES

2023 Co-organiser of a Philippines-UK workshop on embedding fluvial geomorphology in river management policy and practice (~60 participants from universities and government agencies in the Philippines).

2021 Co-organiser of a Philippines-UK workshop on hydrometeorological hazards (online).

2019 Organised the Future Geographers programme for the Geographical Association Annual Conference and Exhibition (University of Manchester).

7. ACADEMIC SERVICE

Associate Editor for the Hydrology section of the journal *Acta Geophysica*.

Peer-reviewer for international journals (~40 manuscripts reviewed since 2020).

Grant reviewer for the British Council / International Science Partnerships Fund.

Co-convenor of the “Progress in Fluvial and Estuarine Geomorphology” at the European Geosciences Union General Assembly (April 2023).

8. SELECTED PUBLICATIONS

Google Scholar profile

Panici, D., Bennett, GL., **Boothroyd RJ.,** Abancó, C., Williams, RD., Tan, FJ and Matera, M. (2024). Observations and computational multi-phase modelling show complex tropical channel changes downstream from rainfall-triggered landslides. *Earth Surface Processes and Landforms*. 49(8), 2498–2516. https://doi.org/10.1002/esp.5841

Boothroyd, RJ., Williams, RD., Hoey, TB., MacDonell, C., Tolentino, PLM., Quick, L., Guardian, EL., Reyes, M., Sabillo, C., Perez, JEG and David, CPC. (2023). National-scale geodatabase of catchment characteristics in the Philippines for river management applications. *PLOS ONE*. 18(3): e0281933. https://doi.org/10.1371/journal.pone.0281933

Leenman, A., Slater, L., Dadson, S., Wortmann, M and **Boothroyd, RJ.** (2023). Quantifying the geomorphic effect of floods using satellite observations of river mobility. *Geophysical Research Letters*. 50(16): e2023GL103875. https://doi.org/10.1029/2023GL103875

Boothroyd, RJ., Williams, RD., Hoey, TB., Tolentino, PLM and Yang, X. (2021). National-scale assessment of decadal river migration at critical bridge infrastructure in the Philippines. *Science of the Total Environment*. 768. https://doi.org/10.1016/j.scitotenv.2020.144460

Boothroyd, RJ., Williams, RD., Hoey, TB., Barrett, B and Prasojo, OA. (2020). Applications of Google Earth Engine in fluvial geomorphology for detecting river channel change. *Wiley Interdisciplinary Reviews: Water*. 8:e21496. https://doi.org/10.1002/wat2.1496

Boothroyd, RJ and Warburton, J. (2020). Spatial organisation and physical characteristics of large peat blocks in an upland fluvial peatland ecosystem. *Geomorphology*. 370:107397. https://doi.org/10.1016/j.geomorph.2020.107397

Boothroyd, RJ., Hardy, RJ., Warburton, J and Marjoribanks, TI. (2017). Modeling complex flow structures and drag around a submerged plant of varied posture. *Water Resources Research*. 53:2877-2901. https://doi.org/10.1002/2016WR020186

Boothroyd, RJ., Hardy, RJ., Warburton, J and Marjoribanks, TI. (2016). The importance of accurately representing submerged vegetation morphology in the numerical prediction of complex river flow. *Earth Surface Processes and Landforms*. 41:567-576. https://doi.org/10.1002/esp.3871