



Dr Ross Woods

BSc(Cant.), MComm(Cant.), PhD(W.Aust.)

Reader in Water & Environmental Engineering

Area of research

Catchment hydrology

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Summary

Hydrology, water resources, hazards, hydroclimatology

Biography

Ross Woods was born and grew up in a small farming community in New Zealand, just south of Christchurch.

He graduated from the University of Canterbury with degrees in Mathematics (Bsc (Hons) 1984) and Operations Research (MComm (Hons) 1986).

In 1986 he was hired by the Hydrology Centre at the Ministry of Works as a research scientist. His office was transferred to the Department of Scientific and Industrial Research (DSIR), and then to the National Institute of Water and Atmospheric Research (NIWA). From 1993-6 he was granted study leave to work on a PhD at the University of Western Australia, under Siva Sivapalan. In 1996 he returned to NIWA, and remained there until 2013, working on research and consulting projects.

Ross joined the University of Bristol in January 2013.

Expertise

I am a hydrologist and I study the water cycle. In particular, I have worked extensively on floods, droughts, the effects of climate change and land use change on water. My interests extends from scales of a few millimetres right up to the entire planet.

- water
- hydrology
- floods
- droughts
- climate change impacts

Memberships

Organisations

[Department of Civil Engineering](#)

Other sites

- [Engineering](#)

Recent publications

- Gnann, S, Woods, R & Howden, N, 2019, '[Is there a baseflow Budyko curve?](#)'. *Water Resources Research*.
- Knoben, WJ, Woods, RA & Freer, JE, 2018, '[A Quantitative Hydrological Climate Classification Evaluated With Independent Streamflow Data](#)'. *Water Resources Research*, vol 54., pp. 5088-5109
- Fowler, K, Coxon, G, Freer, J, Peel, M, Wagener, T, Weston, A, Woods, R & Zhang, L, 2018, '[Simulating Runoff Under Changing Climatic Conditions: A Framework for Model Improvement](#)'. *Water Resources Research*.
- Quinn, N, Blöschl, G, Bárdossy, A, Castellarin, A, Clark, M, Cudennec, C, Koutsoyiannis, D, Lall, U, Lichner, L, Parajka, J, Peters-Lidard, CD, Sander, G, Savenije, H, Smettem, K, Vereecken, H, Viglione, A, Willems, P, Wood, A, Woods, R, Xu, CY & Zehe, E, 2018, '[Joint Editorial: Invigorating hydrological research through journal publications](#)'. *Hydrological Sciences Journal*, vol 19., pp. 365-369
- Lewis, E, Quinn, N, Blenkinsop, S, Fowler, HJ, Freer, J, Tanguy, M, Hitt, O, Coxon, G, Bates, P & Woods, R, 2018, '[A rule based quality control method for hourly rainfall data and a 1 km resolution gridded hourly rainfall dataset for Great Britain: CEH-GEAR1hr](#)'. *Journal of Hydrology*, vol 564., pp. 930-943
- Knoben, W, Woods, R & Freer, J, 2018, '[Global bimodal precipitation seasonality: a systematic overview](#)'. *International Journal of Climatology*.
- Coxon, G, Freer, J, Lane, R, Dunne, T, Howden, N, Quinn, N, Woods, R & Wagener, T, 2018, '[DECIPHeR v1: Dynamic fluxEs and Connectivity for Predictions of Hydrology](#)'. *Geoscientific Model Development Discussions*.
- Berghuijs, WR, Aalbers, E, Larsen, J, Trancoso, R & Woods, R, 2017, '[Recent changes in extreme floods across multiple continents](#)'. *Environmental Research Letters*, vol 12.
- Berghuijs, W, Larsen, J, van Emmerik, T & Woods, R, 2017, '[A Global Assessment of Runoff Sensitivity to Changes in Precipitation, Potential Evaporation, and Other Factors](#)'. *Water Resources Research*, vol 53., pp. 8475-8486
- Peters-Lidard, CD, Clark, M, Samaniego, L, Verhoest, NE, Van Emmerik, T, Uijlenhoet, R, Achieng, K, Franz, TE & Woods, R, 2017, '[Scaling, similarity, and the fourth paradigm for hydrology](#)'. *Hydrology and Earth System Sciences*, vol 21., pp. 3701-3713

[View complete publications list](#) in the University of Bristol publications system

Courses

Dr Woods currently teaches 3 courses: