

Dr Kieran Khamis

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Webpages: [University](#) | [Research gate](#) | [Google Scholar](#)

RESEARCH INTERESTS:

Global change ecology (climate change, glacier retreat; drought); environmental stressors (organic pollution); optical sensors, nutrient dynamics in modified systems (urban/agricultural), high frequency monitoring, sensor networks, freshwater ecology, experimental design, functional traits, community assembly, ecohydrology, statistical analysis.

QUALIFICATIONS:

- 2014 Ph.D. School of Geography, Earth and Environmental Sciences, University of Birmingham. With Prof. A. Milner & D. Hannah
- 2008 MSc. Conservation Biology (Distinction), School of Science and the Environment, Manchester Metropolitan University, Manchester, UK
- 2004 BSc. Geography (2:1), School of Science and the Environment, Manchester Metropolitan University, Manchester, UK.

CURRENT AND PREVIOUS POSTS:

- 2016 Research Fellow, Environmental Change Outdoor Laboratory (ECOLAB), School of Geography, Earth and Environmental Sciences, University of Birmingham, UK.
- 2016 Research and Development Associate (optical sensors and sensor networks). RS Hydro Ltd, Bromsgrove, UK.
- 2013 Knowledge Transfer Associate, School of Geography, Earth and Environmental Sciences, University of Birmingham, UK.
- 2010 Doctoral Researcher (Hydroecology), School of Geography, Earth and Environmental Sciences, University of Birmingham, UK.
- 2007 Aquatic Scientist (Freshwater Taxonomy): APEM Ltd, Heaton Mersey, Stockport, UK.

RESEARCH FUNDING AND OTHER GRANTS:

- 2016 H2020-MSCA-RISE-Smart high-frequency environmental sensor networks for quantifying nonlinear hydrological process dynamics across spatial scales - €2.3 m (contributor and project partner).
- 2015 NERC facility grant (FENAC/2014/05/005) - £20k (CI).
- 2011 Royal Geographical Society field work grant recipient - £3k (PI).
- 2011 School of Geography, Earth and Environmental Sciences (UoB) conference grant recipient - £0.5k.

AWARDS AND PRIZES:

- 2017 Ecohydrology early career publication award
- 2015 Young Scientist Travel Award (YSTA) for European Geophysical Union conference attendance - £0.5k
- 2015 Enterprising Birmingham - Innovation Competition Finalist for design of water quality sensor
- 2015 Innovate UK business leader of the future award for outstanding project management during Knowledge Transfer Partnership. [KTP award](#) - £0.5k
- 2014 Runner-up at the Institute of Water Innovation event – sensor driven process control for the water industry

SELECTED SCIENTIFIC PUBLICATIONS:

- Khamis. K**, C. Bradley, D. M. Hannah (2018). Understanding dissolved organic matter dynamics in urban catchments: insights from in-situ fluorescence sensor technology. *WIREs Water* **5**, e1259. DOI: 10.1002/wat2.1259
- Brown LE, **Khamis K**, et al. (2018). Globally consistent responses of invertebrates to environmental change. *Journal: Nature Ecology & Evolution*. **2**, 325-333. DOI: 10.1038/s41559-017-0426-x
- Blaen PJ, **Khamis K**, et al. (2017). High-frequency monitoring of catchment nutrient exports reveals highly variable storm-event responses and dynamic source zone. *Biogeoscience* **122**, 2265 -2281. DOI: 10.1002/2017JG003904 (IF 3.85)
- Milner A, **Khamis K**, et al. (2017). Glacier shrinkage driving global changes in downstream systems. *PNAS* **114**: 9970-9778. DOI: 10.1002/hyp.11040 (IF 9.66)
- Khamis, K.**, Bradley, C., Hannah, D., Stevens, R (2017). Continuous field estimation of dissolved organic carbon concentration and biochemical oxygen demand using dual-wavelength fluorescence, turbidity and temperature, *Hydrological Processes* **31**, 540-555 (IF 2.67)
- Blaen PJ, **Khamis K**, Lloyd CEM, Bradley C, Hannah D, Krause S. (2016). Real-time monitoring of nutrients and dissolved organic matter in rivers: Capturing event dynamics, technological opportunities and future directions. *Science of the Total Environment* **569**: 647–660. DOI: 10.1016/j.scitotenv.2016.06.116. (IF 4.09)
- Khamis K**, Sorensen JPR, Bradley C, Hannah DM, Lapworth DJ, Stevens R. (2015). In situ tryptophan-like fluorometers: assessing turbidity and temperature effects for freshwater applications. *Environmental science. Processes & impacts* **17**:740–52. DOI: 10.1039/c5em00030k (IF 2.17)
- Khamis K**, A. M. Milner, D. M. Hannah and L. E. Brown. (2015). Predation modifies macroinvertebrate community structure in alpine stream mesocosms. *Freshwater Science*. 43:39-55. (IF 2.44)
- Khamis. K**, D M. Hannah, L. E. Brown, R. Tiberi and Milner A. M (2014) Climate change and alpine aquatic ecosystem response. *Science of the Total Environment*. 493:1242-54. (IF 4.09)
- Khamis K**, M. Hill, D. M. Hannah, A.M. Milner, L.E. Brown, E. Castella. (2014). Alpine aquatic ecosystem conservation policy in a changing climate. *Environmental Science and Policy*. 43:39-55. (IF 3.01)
- Finn, D. S., **K. Khamis**, and A. M. Milner. (2013). Loss of small glaciers will diminish beta diversity in Pyrenean streams at two levels of biological organization. *Global Ecology and Biogeography* 22:40–51. (IF 6.53)

SELECTED CONFERENCE PRESENTATIONS:

- Khamis. K**, M. Ledger, et al. *Stream ecosystem recovery from a simulated supra-seasonal drought*. SEFS annual meeting; Olumouc Czech Republic, July 2017 (oral).
- Khamis. K**, C. Bradley, et al. *Unpicking dissolved organic matter dynamics in an urban river system using time series analysis*. HydroEco17, Birmingham, UK, June 2017 (oral).
- Khamis. K**, A. M. Milner, et al. *Functional diversity of alpine river ecosystems in a changing climate*. SFS annual meeting; Sacramento USA May 2016 (oral).
- Khamis. K**, C. Bradley, et al. *In-situ monitoring of Biochemical Oxygen Demand (BOD) and Dissolved Organic Carbon (DOC)*. SWIG workshop, University of Warwick, Nov. 2015 (Oral).
- Khamis. K**, C. Bradley, D. M. Hannah and R. Stevens. *Dissolved organic matter dynamics during storm events: combining in-situ and laboratory optical measurements*. EGU General Assembly, Vienna, April 2015 (oral).
- Khamis. K**. *The development of a fluorescence sensor platform*. NERC Knowledge Exchange Meeting; University of Exeter, October 2014 (invited oral)