

# CURRICULUM VITAE: PROFESSOR JEMMA LOUISE WADHAM

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**Summary:** Jemma's research interests span three primary fields across Geosciences and Engineering: 1) Water flow through ice sheets, and implications for both ice flow and nutrient/carbon export to the world's oceans; 2) The role of glaciers and ice sheets in regulating global biogeochemical cycles and; 3) Challenging Engineering: development and validation of *in situ* sensing technologies and autonomous platforms for the survey of extreme aquatic ecosystems. Her work involves long field seasons in challenging alpine and polar environments, followed by laboratory-based work, leading > 25 field expeditions to the European Alps, Greenland, Antarctica, Canada and Patagonia (Chile). She has been heavily involved with the Scientific Committee on Antarctic Research (SCAR) with recent work receiving a commendation by SCAR in their "Celebrating Women in Antarctica" campaign. A unifying theme of Jemma's research is its interdisciplinary nature, underpinned by world-class laboratory facilities that she has established (the Low Temperature Experimental Facility and BIOGAS Facility, Bristol). She has published > 90 papers, co-authored a book on "Antarctic Lakes" (Laybourn-Parry and Wadham, 2014) and currently supports a group of 12 postgraduate students and post-doctoral researchers.

## 1. EMPLOYMENT HISTORY and ACADEMIC QUALIFICATIONS

2012	Professor in Glaciology (University of Bristol)
2006	Reader in Physical Geography (University of Bristol)
1998	Lecturer in Physical Geography (University of Bristol)
1998	PDRA (University of Leeds)
1998	PhD - University of Bristol
1994	M.A. – Geography – University of Cambridge

## 2. SPECIAL AWARDS and EXTERNAL POSITIONS

2016	Nomination by the Scientific Committee on Antarctic Research (SCAR) for "Celebrating Women in Antarctica"
2015	Steering Committee member for Royal Society meeting on "Antarctic Subglacial Lakes: first results and future plans" (Chicheley Hall, March 2015)
2011-2013	President of the International Glaciological Society (British Branch).
2010-	Chair of SCAR-ATHENA Expert Group ("Advancing Technologies and ENVironmental Stewardship beneath Antarctica")
2009-2010	Member of the SCAR Action Group " <i>Code of conduct for the exploration and research of subglacial aquatic environments</i> " (AG-CCER-SAE)
2007	Phillip Leverhulme Prize (The Leverhulme Trust)

## 3. FIVE KEY PUBLICATIONS, (90 in total)

1. **Wadham, J.L.**, S. Arndt, S. Tulaczyk, M. Stibal, M. Tranter, A. Ridgwell, J. Telling, E. Lawson, A. Dubnick, M.J. Sharp, A.M. Anesio, C. Butler. **2012**. Large methane reserves beneath Antarctica. **Nature**, 488, 633–637.
2. Chandler, D., **J.L. Wadham**, G. Lis, T. Cowton, A. Sole, I. Bartholomew, J. Telling, P. Nienow, E.B. Bagshaw, D. Mair, S. Vinen and A. Hubbard. **2013**. Evolution of the subglacial drainage system of the Greenland Ice Sheet revealed by tracers, **Nature Geoscience**, DOI:10.1038/NCEO1737.
3. Hawkings, J. **J.L. Wadham**, M. Tranter, R. Raiswell, L.G. Benning, P.J. Statham, A. Tedstone, P. Nienow, K. Lee and J. Telling. **2014**. Ice sheets as a significant source of nanoparticulate iron to the oceans, **Nature Communications**, 5, doi:10.1038/ncomms4929.
4. Chen, T., L. Robinson, M. Beasley, M. Andersen, L. Gregoire, **J.L. Wadham**, D. Fornari, K. Harpp **2016**. Uranium isotope evidence of subglacial weathering during the last deglaciation, **Science**, DOI: 10.1126/science.aag1015.
5. Hawkings, J., **J.L. Wadham**, L. Benning, K. Hendry, M. Tranter, A. Tedstone, P.W. Nienow and R. Raiswell. **2017**. Ice Sheets as a missing source of silica to the world's oceans, **Nature Communications**, doi:10.1038/ncomms14198.