

## Dr Nicholas Barrand BSc, MSc, PhD

Lecturer in Geosciences

**[School of Geography, Earth and Environmental Sciences \(/schools/gees/index.aspx\)](/schools/gees/index.aspx)**

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### About

Nick is a glaciologist, specialising in mass balance and dynamics of the Earth's glaciers and ice sheets. His research aims to understand how and why Earth's land ice cover is changing and the impact of these changes on global sea levels. This research involves application and analysis of airborne and satellite remote sensing tools, in situ measurements and numerical models.

### Qualifications

2008 – PhD, Glaciological Remote Sensing, University of Wales Swansea  
2002 – MSc, Geographical Information Systems, University of Leeds (Distinction)  
2001 – BSc, Geography, Newcastle University (First Class Honours)

### Teaching

GGM203 Geomatics

GGM348 Remote Sensing of the Cryosphere (module lead)

ESCM401 Advanced Field Skills, Assynt residential field course

### Postgraduate supervision

Excellent and eligible students are encouraged to apply for postgraduate research in glaciology at the University of Birmingham. Candidates are expected to hold relevant masters and/or first class honours degrees and are encouraged to monitor the School of Geography, Earth and Environmental Sciences web pages for **[project opportunities \(/schools/gees/courses/postgraduate/phd-projects-old.aspx\)](/schools/gees/courses/postgraduate/phd-projects-old.aspx)** in the Geosystems research group.

Current postgraduate research students

Benjamin Man (M.Sci.) 2013-2014

**[Clemens Schannwell \(http://www.birmingham.ac.uk/schools/gees/people/dr-students/schannwell-clemens.aspx\)](http://www.birmingham.ac.uk/schools/gees/people/dr-students/schannwell-clemens.aspx)** (Ph.D.) 2013-2017

### Other activities

Member of the American Geophysical Union (AGU), European Geosciences Union (EGU), International Glaciological Society (IGS) and Remote Sensing and Photogrammetry Society (RSPSoc).

Scientific reviewer for Natural Environment Research Council (NERC), National Science Federation (NSF), National Geographic Society, Instituto Antartico Chileno (INACH), The Leverhulme Trust, Arctic, Annals of Glaciology, Arctic, Antarctic and Alpine Research, Canadian Journal of Remote Sensing, The Cryosphere, Geomorphology, Geophysical Research Letters, International Journal of Remote Sensing, Journal of Geophysical Research, Journal of Glaciology, Polar Record, Remote Sensing of Environment.

More than 35 weeks remote fieldwork during seven glaciological field seasons (Svalbard, 4; Canadian high- and sub-Arctic, 3), and shorter campaigns in the European Alps and Canadian Rockies. Specific field skills include: glacier mass balance, surface and bed topographic surveying (GPS and ice-penetrating radar), ground support for airborne campaigns (GPS, maintenance of corner reflectors), temperature sensors and automatic weather stations, shallow firn and ice coring, snow density measurements, near-surface snow radar.

### Publications

**[Google Scholar - Publications \(http://scholar.google.co.uk/citations?sortby=pubdate&hl=en&user=7V2XwiEAAAAJ&view\\_op=list\\_works\)](http://scholar.google.co.uk/citations?sortby=pubdate&hl=en&user=7V2XwiEAAAAJ&view_op=list_works)**

[ - ] Way, R.G., Bell, T.J., & **Barrand, N.E.** (in review, 2014) 'Glacier change from the Little Ice Age to present in the Torngat Mountains, northern Labrador, Canada.' Manuscript in review.

[20] Luckman, A., Elvidge, A., Jansen, D., Kulesa, B., Kuipers Munneke, P., King, J. & **Barrand, N.E.** (in press, 2014) 'Surface melt and ponding on Larsen C Ice Shelf and the impact of foehn winds.' Manuscript accepted in Antarctic Science.

[19] Way, R.G., Bell, T.J. & **Barrand, N.E.** (2014) 'An inventory and topographic analysis of the glaciers of the Torngat Mountains, northern Labrador, Canada.' Journal of Glaciology, 60 (223), doi:10.3189/2014JoG13J195.

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- [13] **Barrand, N.E.**, Vaughan, D.G., Steiner, N., Tedesco, M., Kuipers Munneke, P., van den Broeke, M.R. & Hosking, S.J. (2013) 'Trends in Antarctic Peninsula surface melting conditions from observations and regional climate modelling.' *Journal of Geophysical Research - Earth Surface*, 118, 1-16, doi:10.1029/2012JF002559. [[http \(http://onlinelibrary.wiley.com/doi/10.1029/2012JF002559/abstract\)](http://onlinelibrary.wiley.com/doi/10.1029/2012JF002559/abstract)] .pdf ([ftp://ftp.bas.ac.uk/nirr1/jgrf\\_20022\\_Rev.pdf](ftp://ftp.bas.ac.uk/nirr1/jgrf_20022_Rev.pdf))
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