



Dr Jan de Rydt being interviewed while on fieldwork in Antarctica

Jun 15, 2022 13:48 BST

Research fellow receives £1.5m award to study climate change impacts on the Antarctic Ice Sheet

A researcher from Northumbria University has received a prestigious fellowship award to study Antarctica's future contribution to rising global sea level.

[Dr Jan De Rydt](#), a Senior VC Research Fellow specialising in polar glaciology and oceanography, has become the University's fourth recipient of a [UK Research and Innovation \(UKRI\)](#) Future Leaders Fellowship Award, which will

enable him to further evaluate present-day and future changes to the Antarctic Ice Sheet and the impact this will have on sea level rise.

The [Future Leaders Fellowships](#) were announced by UKRI today (Wednesday 15 June) by Science Minister George Freeman. In total, £98 million is being awarded to more than 80 promising future leaders across the UK to undertake research that tackles major global issues, and to support the commercialisation of their innovations.

Northumbria is already becoming known as the UK's leading university for glaciology research and this funding will enable continued research that will feed into other work on ice sheet modelling around the world. It will provide vital intelligence for environmentalists and policymakers as they attempt to combat the effects of climate change.

Starting in September, the project provides £1.5m of funding for Jan and four other researchers to carry out their work over the next four years.

They will run computer simulations that will help them understand better the complex interactions between ocean flows, ice sheet movements and the atmosphere in Antarctica.

Jan said: "We're facing global challenges relating to climate change. Antarctica holds a lot of fresh water in the form of ice. If global warming continues, there's a risk that more of the ice will turn to water, which will cause sea level to rise. In Antarctica, several ice shelves – or floating areas of ice – are being melted away by the ocean. As a result of this process, the ice further upstream starts to flow faster into the ocean.

"What happens in Antarctica has an impact globally. Rising sea level will inevitably have a detrimental effect on low-lying coastal communities such as Bangladesh and the Pacific Islands – in terms of damaged infrastructure, for example, or a reduction in the quality of life of their inhabitants. Eco systems in Antarctica could also suffer, with sea level rise having an adverse impact on wildlife.

"Our research will feed into other global simulations on sea level change and inform policymakers at national and international level. It will help them to identify different scenarios that map out ways in which we can respond to

environmental change.”

Dr Jan de Rydt

The work will build on Northumbria’s extensive expertise in the study of extreme environments around the world. Jan is a member of the [University’s Cold & Palaeo Environments](#) group (CAPE), believed to be the largest team of cold climate researchers in the country. Researchers are involved in major international studies including a £4 million study to [assess tipping points](#) in the Antarctic climate system. They are also taking on leading roles in the £20 million UK/US [International Thwaites Glacier Collaboration](#) where they are investigating one of the most unstable glaciers in Antarctica.

Jan is Northumbria’s fourth recipient of the UKRI Future Leaders Fellowship Award. The others are [Richard Morton](#), [Felicia Gottman](#) and [Noemi Procopio](#), who are undertaking vital research in the areas of solar physics, migration and forensic sciences.

UKRI Chief Executive, Professor Dame Ottoline Leyser, said: “The Future Leaders Fellowships provide researchers and innovators with the freedom and generous long-term support to progress adventurous new ideas, and to move across disciplinary boundaries and between academia and industry.

“The fellows announced today provide shining examples of the talented researchers and innovators across every discipline attracted to pursue their ideas in universities and businesses throughout the UK, with the potential to deliver transformative research that can be felt across society and the economy.”

According to results from the recent Research Excellence Framework (REF2021), Northumbria is ranked second in the UK for research power in [Geography and Environmental Studies](#). All of the University’s research in this area is rated as being either world-leading or internationally excellent.

Northumbria is a research-intensive modern university with a global reputation for academic excellence. Find out more about us at

www.northumbria.ac.uk --- Please contact our Media and Communications team at media.communications@northumbria.ac.uk with any media enquiries or interview requests ---

Contacts



Rik Kendall

Press Contact
PR and Media Manager
Business and Law / Arts, Design & Social Sciences
rik.kendall@northumbria.ac.uk
07923 382339



Andrea Slowey

Press Contact
PR and Media Manager
Engineering and Environment / Health and Life Sciences
andrea.slowey@northumbria.ac.uk
07708 509436



Rachael Barwick

Press Contact
PR and Media Manager
rachael.barwick@northumbria.ac.uk
07377422415



James Fox

Press Contact
Student Communications Manager
james2.fox@northumbria.ac.uk



Kelly Elliott

Press Contact
PR and Media Officer
kelly2.elliott@northumbria.ac.uk



Gemma Brown

Press Contact

PR and Media Officer

gemma6.brown@northumbria.ac.uk