



Lionel Carter Professor of Marine Geology, Victoria University Wellington

Lionel Carter trained in geology and oceanography at the universities of Auckland and British Columbia, Canada, and he has undertaken research in the North Atlantic, Pacific and Southern oceans. He led New Zealand contributions to major international projects including Ocean Drilling Program Leg 181 and the MARGINS "Source to Sink" initiative. Expertise gained from marine geology/oceanography research is applied to ocean engineering projects, in particular the protection of the global submarine telecommunication network that underpins the Internet and international communications.

<http://www.vuw.ac.nz/antarctic/people/lionel-carter/index.aspx>

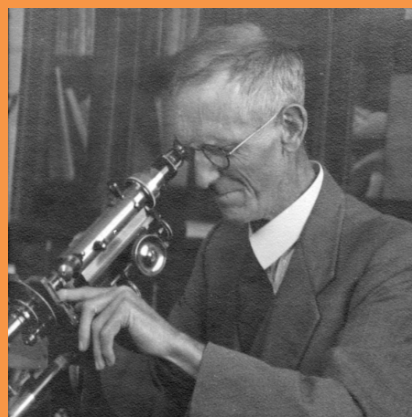
From Ocean to Cloud - using oceanography to keep the Internet running.

School of Environment Inaugural Bartrum Lecture

When you press SEND on an email, view a movie or make an online purchase; if your activity involves an overseas destination then there is more than a 95% chance it will travel by subsea fibre-optic cable. In the financial world, just one major banking organisation will have daily transactions of about US\$3.9 trillion that move around the global network of cables at the speed of light.

Given the undeniable social and economic importance of cables, their protection is of great importance. Ever since the first, fully operational international cable was laid across the North Atlantic Ocean precisely 150 years ago, marine geology has helped identify safe passages for cables. That role has grown exponentially with the rapid expansion of the Internet and communications in general. Now cable routes are planned with metre-like precision guided by the latest knowledge of the marine environment, in particular the physical and biological processes that can affect this critical infrastructure.

The inaugural Bartrum Lecture provides a non-technical view to the world of subsea cables, the research that leads to their protection, and the insights they provide on an abyssal ocean that can only be described as dynamic.



John Arthur Bartrum was the first Professor of Geology at Auckland University College from 1927 to 1949.

His contribution to NZ geology was recognised by the New Zealand Institute [later the Royal Society of New Zealand] which awarded him a fellowship in 1928, the Hutton Memorial Medal in 1932 and the Hector Memorial Medal and Prize in 1939. He was also a fellow of the Geological Society of London (1928) and of America (1929).

**Thursday 11 August 2016
5-6pm**

**Arts 1 Building 206-220
(Lecture Theatre 4)**

16 Symonds Street

Followed by drinks & nibbles

at OGH members' Lounge 6-7.30pm

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