

# *The ONR Chair in Arctic Marine Science at the Naval Postgraduate School*

The Naval Postgraduate School (NPS) Chair in Arctic Marine Science was initiated in 1976, largely through the efforts of Ron McGregor, then head of the Arctic Research Program at the Office of Naval Research, and Warren Denner, then of the NPS. The objectives of the Chair, throughout its existence, were to conduct polar research and assist in translating basic knowledge into operational products and to inculcate an interest in polar science in NPS students in order to provide the Navy with a cadre of officer and civilian polar experts.

Over the course of the Chair's existence, the Chairholders represented a broad spectrum of countries, universities, labs, and disciplines. Five came from other countries: Allen Milne from Canada, Peter Wadhams from England, Ola Johannessen and Arne Foldvik from Norway, and Ursula Schauer from Germany. Government laboratories were represented by Alan Beal of the Arctic Submarine Laboratory, Willy Weeks and Steve Ackley from the U.S. Army Cold Regions Research and Engineering Laboratory, and John Newton from the Navy Research and Development Activity. Private consultant and small business Chairs were Miles McPhee, Bob Pritchard, Jim Wilson, and Max Coon.

When categorized by scientific discipline, the largest preponderance, not surprisingly, were associated with sea ice; in this category, I have placed Warren Denner, Willy Weeks, Peter Wadhams, Steve Ackley, Bob Pritchard, Alan Thorndike, Bill Hibler, Martin Jeffries, Mark Johnson, and Max Coon. Their studies mainly dealt with the mechanics, properties, strength, thickness, and temporal and spatial distribution of ice. The study of the underlying ocean was the focus of work by Arne Foldvik, Joe Niebauer, Jamie Morison, Miles McPhee, Ursula Schauer,

and, if we also associate the specialty of remote sensing, Ola Johannessen and Lawson Brigham. The lone Antarctic oceanographer was, of course, Arnold Gordon. The Navy has had a long and intense interest in acoustic propagation and noise generation in the polar seas, tied to its interest in submarine operations in ice-covered waters and the conduct of antisubmarine warfare (ASW). This group of scientists included John Newton, Jim Wilson, Allen Milne, Alan Beal, and Warren Denner. The lone biological oceanographer who occupied the Chair was Walker Smith, but he was well known for his interactions with physical oceanographers. Climate variability was the focus of John Walsh and Andrey Proshutinsky.

Some remarks are in order on the typical experience of a Chairholder. All enthusiastically enjoyed their tenure at the NPS in Monterey. Most found time to complete long-overdue manuscripts, to thoughtfully examine old and recent data sets, or to participate in planning future field projects. It was no coincidence that Chairholders played prominent roles in the early planning of the Marginal Ice Zone Experiment (MIZEX) and follow-on experiments such as the Coordinated Eastern Arctic Experiment (CEAREX) and the Leads Experiment (LEADDEX). Many Chairs served as thesis advisors for Naval Officer students, and their expertise was highly sought after by both faculty and students.

I believe that the original goals of the Arctic Chair were consistently met. The U.S. Navy developed a pool of officers who had a strong appreciation for the impact of the Arctic environment on all aspects of naval operations, and many of these officers went on to occupy positions of technical and strategic importance at the National/Naval Ice Center, the Office of Naval Research, the Naval Research Laboratory, and other commands.

*This article was prepared  
by Robert Bourke, Naval  
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## Occupants of the ONR Arctic Marine Science Chair

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| <p><b>1976-77 Warren W. Denner</b><br/>Naval Postgraduate School<br/>(Ice Dynamics/Mechanics)</p>                | <p><b>1989-90 James H. Morison</b><br/>University of Washington<br/>(Ice Boundary Layer Dynamics)</p>             |
| <p><b>1977-78 Alan M. Beal</b><br/>Arctic Submarine Laboratory<br/>(Sea Floor Bathymetry)</p>                    | <p><b>1990-91 John L. Newton</b><br/>Private Consultant<br/>(Arctic Antisubmarine Warfare)</p>                    |
| <p><b>1978-79 Wilford (Willy) F. Weeks</b><br/>Cold Regions Research and Engineering Lab<br/>(Ice Mechanics)</p> | <p><b>1991-92 Alan S. Thorndike</b><br/>University of Puget Sound<br/>(Sea Ice Physics)</p>                       |
| <p><b>1979-80 Allen R. Milne</b><br/>Institute of Ocean Sciences (Canada)<br/>(Acoustics/Ambient Noise)</p>      | <p><b>1992-94 James H. Wilson</b><br/>Private Consultant<br/>(Arctic Ambient Noise and Antisubmarine Warfare)</p> |
| <p><b>1980-81 Peter Wadhams</b><br/>Scott Polar Research Institute (England)<br/>(Ice-Wave Interaction)</p>      | <p><b>1994-95 Arnold L. Gordon</b><br/>Lamont-Doherty Earth Observatory<br/>(Antarctic Circulation)</p>           |
| <p><b>1981-82 Ola M. Johannessen</b><br/>University of Bergen (Norway)<br/>(Marginal Ice Zone)</p>               | <p><b>1995-96 Lawson W. Brigham</b><br/>CAPT, U.S. Coast Guard (Ret.)<br/>(Ice Operations, Remote Sensing)</p>    |
| <p><b>1982-83 Miles G. McPhee</b><br/>Private Consultant<br/>(Ice-Water Boundary Layer)</p>                      | <p><b>1996-97 William D. Hibler, III</b><br/>Dartmouth College<br/>(Sea Ice Modeling)</p>                         |
| <p><b>1983-84 Walker O. Smith</b><br/>University of Tennessee<br/>(Ice Edge Biology)</p>                         | <p><b>1997-98 Martin O. Jeffries</b><br/>University of Alaska<br/>(Sea Ice Processes)</p>                         |
| <p><b>1984-85 Joseph Niebauer</b><br/>University of Alaska<br/>(Ice Dynamics)</p>                                | <p><b>1998-99 Andrey Proshutinsky</b><br/>University of Alaska<br/>(Arctic Climate Modeling)</p>                  |
| <p><b>1985-86 Stephen A. Ackley</b><br/>Cold Regions Research and Engineering Lab<br/>(Ice Mechanics)</p>        | <p><b>1999-00 Ursula Schauer</b><br/>Alfred Wegener Institut (Germany)<br/>(Arctic-Subarctic Fluxes)</p>          |
| <p><b>1986-87 John E. Walsh</b><br/>University of Illinois<br/>(Sea Ice Variability)</p>                         | <p><b>2000-01 Mark Johnson</b><br/>University of Alaska<br/>(Sea Ice Processes)</p>                               |
| <p><b>1987-88 Robert S. Pritchard</b><br/>Private Consultant<br/>(Ice Dynamics)</p>                              | <p><b>2001-02 Max Coon</b><br/>Private Consultant<br/>(Sea Ice Modeling)</p>                                      |
| <p><b>1988-89 Arne Foldvik</b><br/>University of Bergen (Norway)<br/>(Ocean/Ice Shelf Interaction)</p>           |   |