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Introduction

This special issue of DAO honors Prof. Allan Robinson for his exceptional contributions to the field of ocean science over a career spanning 4 decades. In the late 1950s and early 1960s, Prof. Robinson helped to establish the theoretical underpinnings of the emerging field of geophysical fluid dynamics. His influential papers of the time included seminal studies of the thermocline, the wind-driven ocean circulation, and other processes. During the 1970s, Prof. Robinson played a major role in enhancing our observational and theoretical understanding of mid-ocean eddies and their dynamics, and was a driving force behind the very successful, international MODE and POLYMODE programs.

In the 1980s, Prof. Robinson led the way on the development and application of regional numerical modeling of mesoscale eddy processes. Recognizing that numerical models and ocean observations were both crucial to the success of this approach, Prof. Robinson became a leader in the field of ocean data assimilation. His early efforts at real-time simulation and forecasting anticipated, by over a decade, the central role of these approaches today.

As the practice of assimilative regional ocean modeling matured, it became clear that this constituted an ideal framework for coupled interdisciplinary studies. In the 1990s, with Prof. Robinson again at the forefront, coupled models have developed to the point that they are now commonly used to explore the impact of the physical environment on processes as diverse as biogeochemical cycling, ecosystem dynamics, and acoustic propagation.

In February 1998, a Symposium in honor of Prof. Robinson was convened at the AGU/ASLO Ocean Sciences meeting in San Diego, CA. More than 90 papers were presented at the Symposium, covering many, but not all, of the areas that Prof. Robinson has influenced during his long and illustrious career. The collection of papers included here are a representative subset of the papers presented at this Symposium.

With 4 decades of discovery and still going strong, Prof. Robinson has set an exceptionally high standard in ocean science. His relentless quest for understanding of the inner workings of the ocean has inspired many students, postdoctoral fellows, and colleagues alike.

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