

## Professor Oscar Schofield

Distinguished Professor and Chair of Marine and Coastal Sciences, Rutgers University, USA

Oscar Schofield is a Distinguished Professor and Chair of Marine and Coastal Sciences at Rutgers University. He received his PhD at the University of California at Santa Barbara in cellular biology. He co-founded and is currently co-Director of the Center of Ocean Observing Leadership which has over the last 2 decades innovated a wide range of the ocean observing technologies ranging from seafloor cables, autonomous gliders, shore-based radars, and satellite remote sensing. His research spans temperate and polar seas. In the Antarctica, Oscar is part of a long term study in its 27th year studying how shifting physics is altering the ecology of the West Antarctic Peninsula.



### *Technology for future priority research*

Humanities ability to study the ocean has been undergoing a major technical revolution with the advent of autonomous vehicles providing a sustained presence in the ocean as well as the development of sophisticated models that offer the potential for accurately forecasting ocean conditions. Additionally, the development of global wireless communication allow for first time in human history the possible for global omnipresence. Given these advances, current focus is now shifting to developing sensors that define biological and chemical properties that had been major road blocks in the past. Additionally development of robust data systems are being improved, however there is much work to do to ensure data is open and easily linked to model systems. As these networks grow in scale, increasing the autonomy of the systems and the network as a whole will be required to provide a scalable system. Finally, implementation of these systems will require international cooperation and coordination. This will require developing a range new funding vehicles especially as many of these networks often fall in the grey zone between research projects and operational missions. Despite these hurdles, the future is bright for exploring and understanding the present and future ocean.