



## WOODS HOLE OCEANOGRAPHIC INSTITUTION

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**Mark Abbott is the tenth Director and President of Woods Hole Oceanographic Institution.** With growing recognition of the importance of the need for a new approach to ocean stewardship, he has worked to maintain WHOI as a world leader in ocean science, technology, and education. “Wicked problems,” such as coastal resilience, sustainable fisheries, and healthy ocean ecosystems, will require that we bring new scientific understanding and new technologies to enable society to live in a sustainable partnership with our ocean. Along with new hires to the WHOI scientific staff, he has enabled the creation of new facilities that will foster new interdisciplinary partnerships and programs as well as new facilities to enable innovation.

His research focuses on the interaction of biological and physical processes in the upper ocean and relies on both remote sensing and field observations. He is a pioneer in the use of satellite ocean color data to study coupled physical/biological processes. He advocated the inclusion of chlorophyll fluorescence bands in MODIS (the Moderate Resolution Imaging Spectroradiometer on EOS Terra and Aqua) and developed next-generation ocean primary productivity algorithms that used chlorophyll fluorescence data to estimate the physiological health of upper ocean phytoplankton. He has deployed a wide variety of ocean color sensors in the upper ocean, including moored arrays at the Polar Front in the Southern Ocean and ocean drifters in the California Current as well as the Polar Front. He is presently the principal investigator on a grant from the Gordon and Betty Moore Foundation that is formulating a new vision for the design, development and deployment of ocean sensors, one that takes its cues from the small, agile startup businesses and creative “maker spaces” that have sought to disrupt and reimagine conventional approaches to technology development. He is also funded by the Office of Naval Research to explore the impacts of new microprocessor architectures on underwater systems.