

# Kattawar Earns Oceanography Society's 2014 Jerlov Award

August 22, 2014



**Dr. George W. Kattawar**, professor emeritus of physics and astronomy at Texas A&M University, has been selected to receive **The Oceanography Society's** 2014 Nils Gunnar Jerlov Award.

The Jerlov Award, **named for ocean optics research pioneer Nils Gunnar Jerlov** and funded by NASA and the U.S. Office of Naval Research, is bestowed every two years to recognize outstanding achievements in ocean optics and ocean color remote sensing research. Kattawar, a renowned expert in optics and member of the world-class **Texas A&M Institute for Quantum Science and Engineering (IQSE)**, was selected on the basis of "contributions to the advancement of our knowledge of the nature and consequences of light in the ocean."

Kattawar joined the Texas A&M faculty in 1968 and previously was honored by the Texas Academy of Science (TAS) as the Distinguished Texas Scientist of the Year for 2011. He is internationally respected for his contributions to radiative transfer theory in planetary atmospheres and oceans as well as applications to light propagation. His work centers on the use of polarization to study a wide variety of theoretical and applied topics in oceanic optics and related fields, including time dependent three-dimensional geometries.

Kattawar will be presented with his award during an October 30 ceremony as part of TOS's annual conference, **Ocean Optics XXII**, set for October 26-31 in Portland, Maine. The award consists of a bronze medallion and a cash award. In addition, Kattawar will be honored locally with a symposium to be hosted by the IQSE the following week.

"We in the Institute for Quantum Science and Engineering are simply delighted that George has been recognized in this most appropriate fashion," said Marlan O. Scully, distinguished professor of physics and astronomy and IQSE director. "George has made contributions to optics far beyond that field of ocean optics. For example, he did his thesis on the Casimir effect and vacuum fluctuations as they appear in quantum electrodynamics. He is also a very knowledgeable computational physicist and applied mathematician, using his vast knowledge of Monte-Carlo calculations to help his colleagues solve related problems. His ability to put his finger on the heart of the matter has helped many of us on many occasions."

Kattawar, Class of 1961, received both his master's of science (1961) and Ph.D. (1964) degrees from Texas A&M University on a National Defense and Education Act Fellowship after earning his bachelor's of science degree from Lamar University with highest honors. His five-decade career in academia spans the gamut of optics and applied physics -- a prolific body of work that has resulted in significant contributions in such diverse areas as biomedical optics, radiative transfer in planetary atmospheres, cloud property studies related to global warming, invisibility cloaking, ultrashort laser propagation in water, anthrax detection, and camouflage in cephalopods. In addition to being the author or co-author of nearly 200 publications in scholarly journals, he is co-inventor on three patents with two more pending and has mentored more than 40 graduate and postdoctoral students.

"George Kattawar has been associated with our department since he was in graduate school, and we're all delighted he is receiving this award," said George R. Welch, professor and head of the **Department of Physics and Astronomy**. "His enormous body of research on ocean optics, polarization, and scattering, including optics of maritime biophysical systems, makes him incredibly deserving of such an honor. He is also the third most prolific author in the history of the journal *Applied Optics*."

A fellow of the Optical Society of America since 1976, Kattawar has been elected to two, three-year terms on the National Research Council's Committee on Recommendations for U.S. Army Basic Scientific Research and served as a major consultant to the U.S. Navy for several secret projects related to national defense. In 2009 he was selected to serve on the External Advisory Board of the Stevens Institute of Technology charged with assessing their engineering and science programs. In 1981 he received the Amoco Foundation Award for distinguished teaching, and in 1990 he won a Teacher/Scholar Award. He is a former associate editor of the *Journal of Geophysical Research*.

In addition to chairing the Texas A&M Department of Physics and Astronomy's Graduate Admissions Committee for more than 30 years, he served as the College of Science representative on a committee chosen in 1982 by then-newly appointed President Dr. Frank Vandiver to create a faculty senate at Texas A&M.

Before coming to Texas A&M, Kattawar held positions at Los Alamos Scientific Laboratory, Esso Production Research and the UNT.

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