

Biographical Sketch George W. Kattawar

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Professional Preparation

B.S., Mathematics, Lamar University, 1959 (Highest Honors)
M.S., Physics, Texas A&M University, 1961
Ph.D., Physics, Texas A&M University, 1964

Appointments

1973-present	Professor, Dept. of Physics & Astronomy Institute for Quantum Science & Engineering Texas A&M University, College Station, Texas
1968-1973	Associate Professor, Dept. of Physics, Texas A&M University, College Station, Texas
1966-1968	Assistant Professor, North Texas State University, Denton, Texas with joint appointment at Southwest Center for Advanced Studies, Dallas, Texas
1964-1966	Senior Researcher, Esso Production Research, Houston, Texas
s1963-1964	Senior Research Physicist, Los Alamos National Laboratory, Los Alamos, New Mexico

Selected Publications (out of 175 peer reviewed journal articles, 1 book, and 2 book chapters)

Five publications relevant to the proposed research

1. M. O. Scully, G. W. Kattawar, R. P. Lucht, T. Opatrny, H. Pilloff, A. Rebane, A. V. Sokolov, and M. S. Zubairy, "FAST CARS: Engineering a laser spectroscopic technique for rapid identification of bacterial spores", Proceedings of the National Academy of Sciences, 99, 10994-11001, Aug. 20, 2002.
2. Yu You, George W. Kattawar, Peng-Wang Zhai, and Ping Yang, "Zero-backscatter cloak for aspherical particles using a generalized DDA formalism," Optics Express, 16, Issue 3, 2068-2079, (2008).
3. Yu You, George W. Kattawar, Peng-Wang Zhai, and Ping Yang, "Invisibility cloaks for irregular particles", Optics Express, 16, 6134-6145, 2008
4. Sokolov, Alexei V., Lucas M. Naveira, Milan P. Poudell, James Strohaber, Cynthia S. Trendafilova, William C. Buck, Jieyu Wang, Benjamin D. Strycker, Chao Wang, Hans Schuessler, Alexandre Kolomenskii, and George W. Kattawar, "Propagation of ultrashort laser pulses in water: linear absorption and onset of nonlinear spectral transformation", Applied Optics, 49, 513-519, 2010
5. Lucas M. Naveira, Benjamin D. Strycker, Jieyu Wang, Gombojav O. Ariunbold, Alexei V. Sokolov, and George W. Kattawar, "Propagation of femtosecond laser pulses through water in the linear absorption regime", Appl. Optics, 48, 1828-1836, 2009

Five additional significant publications

1. M. J. Rakovic, G. W. Kattawar, M. Mehrubeoglu, B. D. Cameron, L. V. Wang, S. Rastegar, and G. L. Cote, "Light backscattering polarization patterns from turbid media: theory and experiment," Appl. Opt. 38, 3399-3408, 1999
2. G. W. Kattawar and M. J. Rakovic " Virtues of Mueller Matrix imaging for underwater target detection" Appl. Opt.38, 6431-6438, 1999
3. C. Li, G.W. Kattawar, and P. Yang, "Identification of aerosols by their backscattered Mueller images", Optics Express, 14, 3616-3621, (2006).
4. Guang Chen, Ping Yang, and George W. Kattawar, "Application of the Pseudo-spectral time domain method to the scattering of light by nonspherical particles", J. Opt. Soc. Am. A 25, 785-790 (2008).
5. Edward S. Fry, George W. Kattawar, Benjamin D. Strycker, and Peng-Wang Zhai, "Effective path lengths in an integrating cavity", Appl. Optics, 49, 575-577, 2010

Synergistic Activities

- Referee papers for the following Journals:
Applied Optics, Journal of the Optical Society of America, Optics Communications, Optics Letters, Journal of Electromagnetic Waves and Applications, Journal of Quantitative Spectroscopy and Radiative Transfer, Limnology and Oceanography, Journal of Geophysical Research, Journal of Atmospheric Sciences, Biological Reviews, and, The American Naturalist
- Elected to Fellow status in the Optical Society of America, 1976
- Received Amoco Foundation Teaching Excellence Award, 1981
- Received Teacher/Scholar Award, 1990
- Elected for two, three year terms on the Committee on Recommendations for U.S. Army Basic Scientific Research under the National Research Council
- Selected to serve on the National Committee on Graduate Education of the American Association of Physics Teachers, 2002-2005
- Former Associate Editor, Journal of Geophysical Research: Oceans
- Former Associate Editor, Journal of Transport Theory and Statistical Physics
- Editor of SPIE Milestone Series on "Multiple Scattering in Plane Parallel Atmospheres and Oceans: Techniques"

Collaborators (last 48 months)

Ping Yang, Texas A&M University	Changhui Li, Washington University
Dariusz Stramski, Scripps Institute of Oceanography	Edward Fry, Texas A&M University
Molly Cummings, University of Texas	Talbot Waterman, Yale University
Eleonora Zege, Stepanov Inst., Minsk, Belarus	Marlan Scully, Texas A&M Univ.
Ken Voss, University of Miami	Torsten Siebert, Texas A&M University
Howard Schultz, U. Mass.	Tommy Dickey, UCSB
Alexei Sokolov, Texas A&M University	Hans Schuessler, Texas A&M University
Alexandre Kolomenski, Texas A&M University	Chris Zappa, Lamont-Doherty Earth Observatory of Columbia University

Graduate and Post Doctoral Advisors

Melvin Eisner, (Ph.D. advisor, retired)

Thesis Advisor and Postdoctoral-Scholar Sponsor

<u>Thesis advisor for:</u>	<u>Present location</u>
Dr Pengwang Zhai (Ph.D. 2006)	NASA.
Dr. Changhui Li (Ph.D, 2006)	Peking Univ.
Dr. Yu You (Ph.D. 2008)	Texas A&M University
Julie Slanker (M.S., 2008)	Texas A&M University
Joy Wang (M.S., 2009)	Texas A&M University

<u>Postdoctoral Associates:</u>	<u>Present Location</u>
Dr Pengwang Zhai	NASA.
Dr. Changhui Li	Peking Univ.
Dr. Yu You	Texas A&M Univ.