LAKSHMI KANTHA

VERSION January 31, 2020

ADDRESS

Professor, Department of Aerospace Engineering Sciences, Campus Box 431, University of Colorado, Boulder, CO 80309-0431
(303) 492-3014 (Office), 492-6677 (Secretary), 492-2825 (Fax)
E-mail: kantha@colorado.edu

PROFESSIONAL HISTORY

1991-	Professor, Aerospace Engineering Sciences, University of Colorado, Boulder, Colorado (Tenured 1995).
2020	Visiting Professor, Kyoto University, Japan (January 16th to July 15th)
2013	Visiting Professor, Kyoto University, Japan (September 15th to December 15th)
2013	Visiting Scientist, Japan Agency for Marine Science and Technology, Japan (June 25th to September 11th)
1999-00	Visiting Research Scientist, NATO SACLANT Undersea Research Center, La Spezia, Italy.
1991-99	IPA Appointment, Naval Oceanographic Office, Stennis Space Center, Mississippi.
1991-97	Expert Consultant, Naval Research Laboratory, Stennis Space Center, Mississippi.
1990-91	Oceanographer, Navy Oceanographic and Atmospheric Research Laboratory, Stennis Space Center, Mississippi.
1988-90	Scientist III, Institute for Naval Oceanography, Stennis Space Center, Mississippi.
1986-88	Senior Visiting Scientist, Atmospheric and Oceanic Sciences Program, Princeton University, Princeton, New Jersey.
1980-86	Research Scientist, Dynalysis of Princeton, Princeton, New Jersey.
1979-80	Research Scientist, Department of Earth and Planetary Sciences, The Johns Hopkins University, Baltimore, Maryland
1975-79	Associate Research Scientist, Department of Earth and Planetary Sciences, The Johns Hopkins University, Baltimore, Maryland
1974-75	Post-doctoral Research Fellow, Department of Earth and Planetary Sciences, The Johns Hopkins University, Baltimore, Maryland
1969-73	Research Assistant, The Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, Cambridge, Massachusetts
1968-69	Junior Research Fellow, National Aeronautical Laboratory, Bangalore, India

EDUCATION

Nov 1973	Ph.D in Fluid Mechanics, Aeronautics and Astronautics, Massachusetts Institute of Technology, Cambridge, Massachusetts
Aug 1969	Master of Engineering (with distinction) in Aerodynamics, Aeronautical Engineering, Indian Institute of Science, Bangalore, India
Apr 1967	Bachelor of Engineering (with distinction) in Mechanical Engineering, Bangalore University, Bangalore, India

HONORS

2020	Visiting Professor, Kyoto University, Japan
2013	Visiting Professor, Kyoto University, Japan
2012	Elected Associate Fellow of American Institute of Aeronautics and Astronautics (AIAA)

2000	North Atlantic Treaty Organization SACLANT Undersea Research Centre Certificate of Service
1996	Naval Oceanographic Office and Naval Research Laboratory Special Act Award for Transitions
1991	Naval Oceanographic and Atmospheric Research Laboratory Commendation for Outstanding Performance during Desert Storm
1991	Institute for Naval Oceanography Incentive Award for assistance to U. S. Navy during Desert Storm.
1968-69	Junior Research fellowship, National Aeronautical Laboratory, Council of Scientific and Industrial Research, India
1967-68	Fellowship, Indian Institute of Science, Bangalore, India
1966-67	Institute of Engineers (India) Centenary Merit Scholarship
1962-66	Government of India National Merit Scholarship

PROFESSIONAL SERVICE/ACTIVITIES

Associate Editor, Ocean Modelling, Elsevier, 2018-
American Institute of Aeronautics and Astronautics, Senior Member, 1991 -
American Geophysical Union, Member, 1983 -
American Meteorological Society, Member, 1983 –
Associate Editor, International Journal of Oceanography, 2010-2015
Member, National Science Foundation Review Panel, 2004
Member, National Science Foundation Review Panel, 2001
Member, Editorial Board, Journal of the Korean Society of Oceanography, 1996
Member, National Academy of Sciences, Naval Studies Board Shallow Water Committee, 1993
Member, Navy CIMREP panel on Navy operational ocean modeling, 1991-1994
Member, International Working Group on Crater Lakes, 1994- 1996
Oceanography Society, Member, 1988 - 1991
Korean Society of Oceanography, Member 1994- 1996
Guest Co-Editor, J. Geophysical research Special MIZEX issue, 1990.
AGU Chapman Conference Committee on the Gulf of Mexico, Member, 1989.

RESEARCH INTERESTS

Primary interest is turbulent mixing in the oceans and the atmosphere, and ocean models. Application of radiosondes and GPS radio occultation soundings to extracting turbulence locations and intensities in the free atmosphere is the current focus. Interested in the use of ST/MST radars in the study of turbulence in the atmosphere. Study of oceanic processes through assimilation of remotely sensed data (including altimetry) into numerical ocean models, nowcasting, hindcasting and short-term forecasting of the ocean state has also been a long-term interest.

BOOKS

Kantha, L. H., and C.A. Clayson, 2000a. *Small Scale Processes in Geophysical Flows*. Academic Press, San Diego, pp 888 (Foreward by Dr. Walter H. Munk).

Kantha, L. H., and C.A. Clayson, 2000b. *Numerical Models of Oceans and Oceanic Processes*. Academic Press, San Diego, pp 940 (Foreword by Dr. Kirk Bryan).

Kantha, L., 2012. *Migration on Wings*: *Energetics and Aerodynamics*. Springer, pp 91.

Kantha, L. and K. Kantha, 2019. *Airbus and Boeing, Clash of the Aviation Titans: Why they build what they build.* Springer (Sorry, still held up by figure permission issues. To be revised in 2020).

PUBLICATIONS (OVER 110 - REFEREED)

Google Scholar: h-index 34, i10-index 87, pubs 238, citations 6,877 (as of 1/31/2020)
Web of Science: h-index 25, pubs 117, citations 3,362 (as of 1/31/2020)

Luce, H., L. Kantha, H. Hashiguchi, A. Doddi, D. Lawrence and M. Yabuki, 2020. On the relationship between TKE dissipation rate and the temperature structure function parameter in the convective boundary layer. *J. Atmos.Sci.* (revised and resubmitted).

Kantha, L., R. A. Weller, J. T. Farrar, H. Rahaman and V. Jampana, 2019. A note on modeling mixing in the upper layers of the Bay of Bengal: Importance of water type, water column structure and precipitation. *Deep-Sea Res. II*, 168. https://doi.org/10.1016/j.dsr2.2019.104643.

Jampana, V., M. Ravichandran, L. Kantha and H. Rahaman, 2019. Modeling slippery layers in the northern Bay of Bengal. *Deep-Sea Res. II*, 168. https://doi.org/10.1016/j.dsr2.2019.07.004.

Mixa, T., D. Fritts, T. Lund, B. Laughman, L. Wang and L. Kantha, 2019. Numerical simulations of high frequency gravity wave propagation through fine structures in the mesosphere. *J. Geophy. Res. Atmos.* 124, 9372–9390. https://doi.org/10.1029/2018JD029746.

Luce, H., L. Kantha, H. Hashiguchi and D. Lawrence,, 2019. Estimation of turbulence parameters in the lower troposphere from ShUREX (2016-2017) UAV data. *Atmosphere,* 10, 384. doi:10.3390/atmos10070384

Kantha, L., H. Luce, H. Hashiguchi and A. Doddi, 2019. Atmospheric structures in the troposphere as revealed by high resolution backscatter images from MU radar operating in range-imaging mode. *Prog. Earth Planet. Sci.* 6:32, https://doi.org/10.1186/s40645-019-0274-1

Kantha, L., H. Luce and H. Hashiguchi, 2019. Mid-level cloud-base turbulence: radar observations and models. *J. Geophys. Res. Atmos.* 124. https://doi.org/10.1029/2018JD029479.

Luce, H., L. Kantha, H. Hashiguchi, D. Lawrence and A. Doddi, 2018. Turbulence kinetic energy dissipation rates estimated from concurrent UAV and MU radar measurements. *Earth Planets Space,* 70-207 (MST Radar Special Issue). DOI:10.1186/s40623-018-0979-1

Kantha, L., H. Luce and H. Hashiguchi, 2018. On a numerical model for extracting TKE dissipation rate from VHF radar spectral width. *Earth Planets Space,* 70-205 (MST Radar Special Issue). DOI:10.1186/s40623-018-0957-7

Kantha, L. and H. Luce, 2018. Mixing coefficient in stably stratified fluids. *J. Phys. Oceanogr.*, 48, 2649-2665. DOI: 10.1175/JPO-D-18-0139.1

Luce, H., L. Kantha, M. Yabuki, and H. Hashiguchi, 2018. Atmospheric Kelvin-Helmholtz billows captured by the MU radar, lidars and a fish-eye camera, *Earth Planets Space*, 70:162. https://doi.org/10.1186/s40623-018-0935-0

Luce, H., L. Kantha, H. Hashiguchi, D. Lawrence, T. Mixa, M. Yabuki, and T. Tsuda, 2018. Vertical structure of the lower atmosphere derived from MU radar, unmanned aerial vehicle and balloon measurements during ShUREX 2015, *Prog. Earth Planet. Sci.*, 5:29, DOI 10.1186/s40645-018-0187-4

Luce, H., H. Hashiguchi, L. Kantha, D. Lawrence, T. Tsuda, T. Mixa and M. Yabuki, 2018. On the performance of the range imaging technique estimated using unmanned aerial vehicles during the ShUREX 2015 campaign. *IEEE Trans. Geosci. Remote Sensing*, 56, 2033-2042, DOI 10.1109/TGRS.2017.2772351.

*Kantha, L., D. Lawrence, H. Luce, H. Hashiguchi, T. Tsuda, R. Wilson, T. Mixa and M. Yabuki, 2017. Shigaraki UAV-Radar Experiment (ShUREX): Overview of the campaign with some preliminary results. *Prog. Earth Planet. Sci.*, 4:19, DOI 10.1186/s40645-017-0133-x
Correction: https://doi.org/10.1186/s40645-018-0210-9

*Luce, H., L. Kantha, H. Hashiguchi, D. Lawrence, M. Yabuki, T. Tsuda and T. Mixa, 2017. Comparisons between high-resolution profiles of squared refractive index gradient M^2 measured by the Middle and Upper Atmosphere Radar and unmanned aerial vehicles (UAVs) during the Shigaraki UAV-Radar Experiment 2015 campaign. *Ann. Geophys.,* 35, 423-441.

Carniel, S., J. Wolf, V. E. Brando and L. Kantha, 2017. Preface: Oceanographic processes on the continental shelf: observations and modeling. *Ocean Sci.,* 13, 495-501.

Kantha, L., D. Lawrence, H. Luce, H. Hashiguchi, T. Tsuda, R. Wilson, T. Mixa and M. Yabuki, 2015. Shigaraki UAV-Radar Experiment (ShUREX 2015): MUR-EAR Workshop, Kyoto University, Uji, Sep. 11-15, 2015.

Mixa, T., L. Kantha, D. Fritts, A. Dornbrack and S. Gisinger, 2015. Incorporating vertical velocity and balloon trajectory data into radiosonde gravity wave analysis: Orographic sources in New Zealand during the DEEPWAVE campaign, 33rd International Conference on Alpine Meteorology (ICAM) 2015, Innsbruck, Austria, Aug. 31 – Sept. 4, 2015.

Mixa, T., D. Fritts, B. Laughman, L. Wang and L. Kantha, 2015. Direct numerical simulations of small scale gravity wave instability dynamics in variable stratification and shear. Poster presented at AGU, San Francisco, Dec ??, 2015.

Kantha, L., T. Mixa, T. Tsuda, H. Hashiguchi, M. V. Ratnam and A. Jayaraman (2016). Atmospheric gravity waves: MST radars and radiosondes. Japan Geoscience Union Meeting, May 15-18, 2015, Chiba City, Japan

Kantha, L. 2017. Lake Nyos. Invited Chapter 7 in *Air Pollution Episodes*, ed. P. Brimblecombe, World Scientific, pp. 129-142.

Falcieri, F. M., L. Kantha, A. Benetazzo, A. Bergamasco, D. Bonaldo, F. Barbariol, V. Malacic, M. S. Sclavo, and S. Carniel, 2016. Turbulence observations in the Gulf of Trieste under moderate wind forcing and different water column stratification. *Ocean Science*, 12, 433-449.

Kantha, L., H. Tamura and Y. Miyazawa, 2014a. Comment on "Wave-turbulence interaction and its induced mixing in the upper ocean" by Huang and Qiao. *J. Geophys. Res*., doi: 10.1002/2013JC009318

Kantha, L. and C. A. Clayson, 2014b. Ocean Mixed Layer. In *Encyclopedia of Atmospheric Sciences*, Second Edition, G. R. North, J. Pyle and F. Zhang (eds). Vol. 1, 290-308.

Kantha, L., 2013b. Empirical models of the Loop Current Eddy detachment/separation time. *J. Waterway, Port, Coastal and Ocean Engineering,* 130627221538004-130627221538004 28 Jun 2013

Kantha, L. 2013a. Classification of hurricanes: Lessons from Katrina, Ike, Irene and Isaac. *Ocean Engineering,* 70, 124-128.

Kantha, L., 2012e. Addendum: What if the gravitational constant G is not a true constant? *Physics Essays*, 25, 471-472, DOI: 10.4006/0836-1398.25.3.471.

Kantha, L., 2012d. What if the gravitational constant G is not a true constant? *Physics Essays*, 25, 282-289, DOI: 10.4006/0836-1398.25.2.282.

Kantha, L. 2012c. Classification of hurricanes, typhoons and cyclones. Chapter 9 of "*Eddies and Hurricanes: Formation, Triggers and Impact*," ed. by A. Tarasov and M. Demidov, NOVA Science Publishers, 10 pp.

Kantha, L., 2012b. Modeling turbulent mixing in the global ocean: second moment closure models. Chapter 1 of "*Turbulence: Theory, Types and Simulation*," ed. by R. J. Marcuso, Nova Publishers, 1-68.

Kantha, L., 2012a. Turbulence dissipation rates in the free atmosphere from high-resolution radiosondes. Chapter 7 of "*Turbulence: Theory, Types and Simulation*," ed. by R. J. Marcuso, Nova Publishers, 239-264.

Carniel, S., L. Kantha, J. W. Book, M. Sclavo and H. Prandke, 2011. Turbulence variability in the upper layers of the Southern Adriatic Sea under a variety of atmospheric forcing conditions. *Continental Shelf Research*. doi:10.1016/j.csr.2011.01.003.

Kantha, L., S. Carniel, C. A. Clayson, and M. Sclavo, 2011. On the use of a simple primary productivity model to assess the skill of a physical ocean model. *International J. Oceanogr. Hydrobiology,* 40, 86-95. DoI:10.2478/s13545-011-0019-2.

Kantha, L., and W. Hocking, 2011. Dissipation rates of turbulence kinetic energy in the free atmosphere: MST radar and radiosondes. *J. Atmos. Solar-Terrestrial Physics,* 73, 1043-1051, doi:10.1016/j.jastp.2010.11.024

Carniel, S., L. Kantha, A. Bergamasco, H. Prandke, R. J. Small, and M. Sclavo, 2010. Layered structures in the upper Ligurian Sea, *Il Nuovo Cimento*, 125, 1567-1586. doi:10.1393/ncb/i2010-10945-8.

Kantha, L., 2010. Decay of aircraft wake vortices under daytime free convection conditions. *AIAA J. Aircraft*, 47, 2159-2164.

Kantha, L., S. Carniel, and M. Sclavo, 2010. A note on modeling double diffusive mixing in the global ocean. *Ocean Modelling*, 36, 40-48. doi:10.1016/j.ocemod.2010.09.003.

Kantha, L., 2010. Discussion of "A hydrodynamics-based surge scale for hurricanes". *Ocean Engineering*, 37,1081-1084. doi:10.1016/j.oceaneng.2010.04.003

Balsley, B., L. Kantha, and W. Cogan, 2010. On the use of slow ascent meter-scale sampling (SAMS) radiosondes for observing overturning events in the free atmosphere. *J. Atmos. Oceanic Tech*., 27, 766-775.

Kantha, L. H., U. Lass, and H. Prandke, 2010. A note on Stokes production of turbulence kinetic energy in the oceanic mixed layer: Observations in the Baltic Sea, *Ocean Dynamics*, 60, 171-180. DOI: 10.1007/s10236-009-0257-7 (errata – DOI: 10.1007/s10236-010-0283-5)

Rojsiraphisal, T., B. Rajagopalan, and L. Kantha, 2009. The use of MTM-SVD technique to explore the joint spatio-temporal modes of wind and sea surface variability in the North Indian Ocean during 1993-2005. *International J. Oceanogr.* doi:10.1155/2009/214828.

Kantha, L. and S. Carniel, 2009. A Note on modeling mixing in stably stratified flows *J. Atmos. Sci.*, 66, 2501-2505.

Rojsiraphisal, T., and L. Kantha, 2009. Meridional heat fluxes in the North Indian Ocean, Chapter 8 in *The Atlantic and Indian Oceans*, eds. E. S. Askew and J. P. Bromley, Nova Science Publishers, 169-178.

Rojsiraphisal, T., L. Kantha and Y. Masumoto, 2009. Variability of currents at 90^{o}E in the equatorial Indian Ocean, Chapter 9 in *The Atlantic and Indian Oceans*, eds. E. S. Askew and J. P. Bromley, Nova Science Publishers, 179-199.

Kantha, L., P. Wittmann, M. Sclavo and S. Carniel, 2009. A preliminary estimate of the Stokes dissipation of wave energy in the global ocean. *Geophys. Res. Lett.,* 36, doi:10.1029/2008GL036193, 2009.

Brown, J., C. A. Clayson, L. Kantha, and T. Rojsiraphisal, 2008. North Indian Ocean variability during the Indian Ocean Dipole, *Ocean. Sci. Discuss*., 5, 213-253.

Kantha, L., S. Carniel and M. Sclavo, 2008. A note on the multimodel superensemble technique for reducing forecast errors. *Il Nuovo Cimento*, 31,199-214. DOI 10.1393/ncc/i2008-10288-2

Lipphardt, B. L., Jr., A. C. Poje, A. D. Kirwan, Jr., L. Kantha and M. Zweng, 2008. Death of three Loop Current rings, *J. Mar. Res.,* 66, 25-60.

Clayson, C. A. and L. Kantha, 2008. Turbulence and mixing in the free atmosphere inferred from high-resolution soundings, *J. Atmos. Oceanic Tech*., 25, 833-852.

Kantha, L., 2008. Tropical Cyclone destructive potential by integrated kinetic energy. *Bull. Amer. Meteorol. Soc.*, 89, 219-221.

Carniel, S., M. Sclavo, L. Kantha and H. Prandke, 2008. Double-diffusive layers in the Adriatic Sea. *Geophys. Res. Lett.* 35, L02605, doi:10.1029/2007GL032389.

Kantha, L., T. Rojsiraphisal and J. Lopez, 2008. The North Indian Ocean circulation and its variability as seen in a numerical hindcast of the years 1993-2004. *Prog. Oceanogr*. 76, 111-147.

Kirwan, A. D. Jr., B. L. Lipphardt, Jr., A. C. Poje, L. Kantha, L. and M. Zweng, 2007. 25 years of nonlinearity in oceanography from the Lagrangian perspective. In *Nonlinear Dynamics in Geosciences*, ed. Tonis, A. A., and J. B. Elsner, Springer, NY, 177-196.

Kantha, L. H., and C. A. Clayson, 2007. On leakage of energy from turbulence to internal waves in the oceanic mixed layer , *Ocean Dynamics*, 57, 151-156 (DOI: 10.1007/s10236-006-0100-3).

Kantha, L., 2006. Discussion on "Second-order closure models for geophysical boundary layers: A review of recent work", *Continental Shelf Research*, 26, 819-822.

Kantha, L., 2006. Time to replace the Saffir-Simpson hurricane scale? *EOS Transactions*, 87, 3&6.

Kantha, L. H., 2006. A note on the decay rate of swell, *Ocean Modelling*, 11, 167-173.

Carniel, S., M. Sclavo, L. H. Kantha and C. A. Clayson, 2005, Langmuir cells and mixing in the upper ocean*, Il Nuovo Cimento,* 28, 33-54.

Kantha, L., 2005. Barotropic tides in the Gulf of Mexico, in *Circulation in the Gulf of Mexico: Observations and Models,* eds. W. Sturges and A. Lugo-Fernandez, American Geophysical Union, 159-164.

Kantha, L. H., J.-K. Choi, K. J. Schaudt and C. K. Cooper, 2005. A regional data-assimilative model for operational use in the Gulf of Mexico, in *Circulation in the Gulf of Mexico: Observations and Models,* eds. W. Sturges and A. Lugo-Fernandez, American Geophysical Union, 165-180.

Kantha, L. H., 2005. Comments on “Oscillatory bottom boundary layers”, *J. Phys. Oceanogr*., 35, 1297-1300.

Nagai, T., H. Yamazaki, H. Nagashima and L. H. Kantha, 2005. Field and numerical study of entrainment laws for surface mixed layer. *Deep-Sea Res. II* , 52, 1109-1132.

Kantha, L. H., 2005. Development, testing and implementation of a real-time nowcast/forecast capability for the Gulf of Mexico, *Monthly Kaiyo (Japan),* 37, 239-256.

Kantha, L. H., 2005. Comments on "Turbulence Closure, Steady State, and Collapse into Waves"*, J. Phys. Oceanogr.*, 35, 131-134.

Kantha, L. H., 2005. Ocean Mixed Layer, in *Marine Turbulence*, eds. H. Baumert, J. Simpson and J. Sundermann, Cambridge University Press, 244-249.

Onken, R., A. R. Robinson, L. H. Kantha C. J. Lozano, J. P. Haley, and S. Carniel, 2005. Inter-model nesting and rapid data exchange in distributed systems, *J. Marine Syst.*, 56, 45-66.

Kantha, L., J.-W. Bao and S. Carniel, 2005. A note on Tennekes hypothesis in second moment closure models, *Ocean Modelling*, 9, 23-29.

Carniel, S., L. Kantha, and M. Sclavo, 2004. Influence of Langmuir cells on the velocity structure in the mixed layer, *Annalen Hydrographiques,* Shom ed., 6e serie, Vol 3, 8-1/8-5.

Kantha, L. H., 2004, A general ecosystem model for applications to carbon cycling and primary productivity studies in the global oceans, *Ocean Modelling,* 6, 285-334.

Kantha, L. H., 2004. The length scale equation in turbulence models. *Nonlin. Processes Geophys*., 11, 83-97.

Chu, P. C., L. M. Ivanov, L. H. Kantha, T. M. Margolina, O. V. Melnichenko, and Y. A. Pobereshny, 2004. Lagrangian Predictability of high resolution regional ocean models . *Nonlin. Processes Geophys*., 11, 47-66.

Kantha, L. and C. A. Clayson, 2004. On the effect of surface gravity waves on mixing in an oceanic mixed layer, *Ocean Modelling,* 6, 101-124.

Kantha, L. H., 2003. Reply to Comments on “On an improved model for the turbulent PBL,” by Canuto et al., *J. Atmos. Sci*., 60, 3047-3049.

Kantha, L. H. and S. Carniel, 2003. Comments on “A generic length-scale equation for geophysical turbulence models,” by L. Umlauf and H. Burchard., *J. Mar.Res.*, 61, 693-702.

Kantha, L. H., 2003. On an improved model for the turbulent PBL, *J. Atmos. Sci*., 60, 2239-2246.

Toner, M., A. D. Kirwan, Jr., A. C. Poje, L. H. Kantha, F. E. Muller-Karger and C.K.R.T. Jones, 2003, Chlorophyll dispersal by eddy-eddy interactions in the Gulf of Mexico. *J. Geophys. Res*., 108(C4), 3105, DOI:10.1029/2002JC001499.

Kirwan, A. D., Jr., M. Toner and L. Kantha, 2003. Predictability, uncertainty and hyperbolicity in the ocean, *International J. Engineering Science*, 41, 249-258.

Kuznetsov, L., M. Toner, A. D. Kirwan, Jr., C. K. R. T. Jones, L. Kantha, and J. Choi, 2002, The Loop Current and adjacent rings delineated by Lagrangian analysis, *J. Mar. Res*., 60, 405-429.

Carniel, S., G. Umgiesser, L. Kantha, and S. Monti, 2002, Tracking the drift of a human body in coastal waters using numerical prediction models of the oceanic, atmospheric and wave conditions. *Science and Justice,* 42, 143-151.

Kantha, L. H., and C. A. Clayson, 2002. Ocean Mixed Layer, in *Encyclopedia of Atmospheric Sciences*, ed. J. Holton, Academic Press.

Chu, P. C., L. M. Ivanov, L. H. Kantha, O. V. Melnichenko, and Y. A. Poberezhny, 2002. Power law decay in model predictability skill, *Geophys. Res. Lett*., 29, 15-17.

Toner, M., A. D. Kirwan, Jr., L. Kantha, and J.-K. Choi, 2001, Can general circulation models be assessed and enhanced with drifter data? *J. Geophys. Res*., 106, 19,653-19,679.

Lopez, J. W., and L. H. Kantha, 2000, Results from a numerical model of the northern Indian Ocean: Circulation in the South Arabian Sea. *J. Mar. Syst*., 24, 97-117.

Lopez, J. W., and L. H. Kantha, 2000, A data-assimilative model of the North Indian Ocean. *J. Atmos. Oceanic Tech*., 17, 1525-1540.

Bao, J.-W., J. M. Wilczak, J.-K. Choi, and L. H. Kantha, 2000. Numerical simulations of air-sea interaction under high wind conditions using a coupled model: A study of hurricane development, *Monthly Weather Review*, 128, 2190-2210.

Tierney, C. C., L. H. Kantha, and G. H. Born, 2000. Shallow and deep water global ocean tides from altimetry and numerical modeling. *J. Geophys. Res*., 105, 11259-11277.

Clayson, C. A., and L. H. Kantha, 1999: Turbulent kinetic energy and dissipation rate in the equatorial mixed layer. *J. Phys. Oceanogr*., 29, 2146-2166.

Overland, J. E., S. Solo, L. H. Kantha, and C. A. Clayson, 1999: Thermal stratification and mixing on the Bering Shelf, in *Dynamics of the Bering Sea,* Eds. T. R. Loughlin and K. Ohtani, Univ. Alaska Sea Grant, Fairbanks, Alasks, 129-146.

Kantha, L. H., 1998, Tides - a modern perspective, *Marine GEODESY*, 21, 275-297.

Kantha, L. H., 1998, Empirical model of the transport and decay of aircraft wake vortices. *AIAA J. Aircraft* , 35, 649-653.

Kantha, L. H., J. S. Stewart, and S. Desai, 1998, Long period lunar fortnightly and monthly ocean tides, *J. Geophys. Res*., 103, 12,639-12,647.

Bruce, J. G., J. C. Kindle, L. Kantha, J. L. Kerling, and J. F. Baily, 1998, A note on recent observations in the Arabian Sea Laccadive Eddy region. *J. Geophys. Res*., 103, 7593-7600.

Kantha, L. H., and C. C. Tierney, 1997. Global baroclinic tides, *Prog. Oceanogr*., 40, 163-178.

Clifford, M., C. Horton, J. Schmitz, and L. Kantha, 1997: An oceanographic nowcast/forecast system for the Red Sea, *J. Geophys. Res*., 102, 25,101-25,122.

Horton, C., M. Clifford, J. Schmitz, and L. Kantha, 1997: A real-time oceanographic nowcast/forecast system for the Mediterranean Sea, *J. Geophys. Res*., 102, 25,123-25,156 (Corrections: *J. Geophys. Res*., 102, 27,911, 1997, and *J. Geophys. Res*., 103, 18,811, 1998).

Chang, K.-I., C.-K. Kim, M.-S. Suk, S.-Y. Nam, and L. H. Kantha, 1997, Barotropic circulation of the South Sea - Preliminary model results, *Ocean Research*, 19, 139-152.

Kantha, L. H., I.- K. Bang, J.- K. Choi, and M.- S. Suk, 1996, Shallow water tides in the Yellow Sea. *J. Korean Soc. Oceanography*, 31, 123-133.

Bang, I.-K., J.-K. Choi, L. H. Kantha, C. Horton, M. Clifford, M.-S. Suk, K.-I. Chang, S.-Y. Nam and H.-J. Lie, 1996, A hindcast experiment in the East Sea (Sea of Japan). *La Mer,* 34, 108-130.

Kantha, L. H., 1996, A simple empirical model of the transport and decay of aircraft wake vortices between parallel runways. *AIAA J. Aircraft,* 33, 752-760.

Kantha, L. H., and S. Piacsek, 1996. Computational ocean modeling. in *The Computer Science and Engineering Handbook*, ed. A. B. Tucker, Jr., 934-958, CRC Press, Florida.

Kantha, L. H., and S. J. Freeth, 1996, A numerical simulation of the evolution of temperature and CO_2 stratification in Lake Nyos since the 1986 disaster, *J. Geophys. Res*., 101, 8,187-8,203.

Wick, G. A., W. J. Emery, L. H. Kantha and P. Schluessel, 1996, The behavior of the bulk-skin sea surface temperature difference under varying wind speed and heat flux. *J. Phys. Oceanogr*. 26, 1969-1988.

Kantha, L. H., 1995. Barotropic tides in the global oceans from a nonlinear tidal model assimilating altimetric tides. Part 1: Model description and results. *J. Geophys. Res.*, *100*, 25,283-25,308.

Kantha, L. H., S. D. Desai, J. W. Lopez, C. Tierney, M. Parke and L. Drexler 1995. Barotropic tides in the global oceans from a nonlinear tidal model assimilating altimetric tides. Part 2: Altimetric and geophysical implications. *J. Geophys. Res.*, *100*, 25,309-25,317.

Kantha, L. H., 1995. A numerical model of Arctic leads. *J. Geophys. Res, 100,* 4653-4672.

Kantha, L. H. and C. A. Clayson, 1994. An improved mixed layer model for geophysical applications. *J. Geophys. Res., 99,* 25235-25266.

Kantha, L., R. Leben, G. Born, D. Beitzell, S. Harper and J. Kindle, 1994. TOPEX near-real time altimetry in the northern Indian Ocean . *WOCE Notes, 6*, No. 2, 9-14.

Ly, N. L. and L. H. Kantha, 1993. A numerical study of the nonlinear interaction of hurricane Camille with the Gulf of Mexico Loop Current. *Oceanologica Acta, 16,* 341 - 348.

Horton, C. , M. Clifford, D. Cole, J. Schmitz and L. Kantha, 1992. Operational modeling: Semi - enclosed basin modeling at the Naval Oceanographic Office. *Oceanography, 5,* 69 - 72.

Hakkinen, S., G. L. Mellor and L. H. Kantha, 1992. Modeling deep convection in the Greenland Sea. *J. Geophys. Res., 97*, 5389 - 5408.

Muench, R. D., K. Jezek and L. H. Kantha, 1991. Introduction: Third marginal ice zone research collection. *J. Geophys. Res.*, *96*, 4529 -4530.

Kantha, L.H. and A. Rosati, 1990. On the effect of curvature on turbulence in stratified fluids. *J. Geophys. Res.*, *95*, 20313 - 20330.

Kantha, L.H., A.F. Blumberg and G.L. Mellor, 1990. Computing phase speeds at an open boundary. *J. Hydraulic Engineering*, *116*, 592 - 597.

Mellor, G.L. and L.H. Kantha, 1989. An ice-ocean coupled model. *J. Geophys. Res.*, *94,* 10937-10954.

Kantha, L.H. and G.L. Mellor, 1989. A two-dimensional coupled ocean-ice model of the Bering Sea Marginal Ice Zone. *J. Geophys. Res.*, *94,* 10921-10936.

Galperin, B., A. Rosati, L.H. Kantha and G.L. Mellor, 1989. Modelling rotating stratified turbulent flows with application to oceanic mixed layers. *J. Phys. Oceanogr.*, *19*, 901-916.

Galperin, B. and L.H. Kantha, 1989. A turbulence model for rotating flows. *AIAA J.*, *27*, 750-757.

Kantha, L.H. and G.L. Mellor, 1989. A numerical model of the atmospheric boundary layer over a marginal ice zone. *J. Geophys. Res.*, *94*, 4959-4970.

Kantha, L.H., A. Rosati and B. Galperin, 1989. Effect of rotation on vertical mixing and associated turbulence in stratified fluids. *J. Geophys. Res.*, *94*, 4843-4854.

McPhee, M.G. and L.H. Kantha, 1989. Generation of internal waves by sea ice. *J. Geophys. Res.*, *94*, 3287-3302.

Galperin, B., L.H. Kantha, S. Hassid and A. Rosati, 1988. A quasi-equilibrium turbulent energy model for geophysical flows. *J. Atmos. Sci., 45,* 55-62.

Kantha, L.H., 1986. Comments on "A heat balance for the Bering Sea ice edge". *J. Phys. Oceanogr, 16,* 2205-2207.

Kantha, L.H., 1985. Comments on "On tidal motion in a stratified inlet, with particular reference to boundary conditions". *J. Phys. Oceanogr., 15*, 1608-1609.

Kantha, L.H., A.F. Blumberg, H.J. Herring and G.R. Stegen, 1985. The use and testing of a model for upper ocean dynamics. In *The Ocean Surface*, eds Y. Toba and H. Mitsuyasu, Reidel Publ. Co., 547-552.

Blumberg, A.F. and L.H. Kantha, 1985. Open boundary condition for circulation models. *J. of Hydraulic Engineering, ASCE, 111*, 237-2555.

Kantha, L.H. G.L. Mellor and A.F. Blumberg, 1982. A diagnostic calculation of the general circulation in the South Atlantic Bight. *J. Phys. Oceanogr., 12,* 805-819.

Kantha, L.H., 1981. 'Basalt Fingers' - Origin of Columnar Joints? *Geological Magazine 118*, 251-264.

Kantha, L.H., 1980. A note on the effect of viscosity on double-diffusive processes. *J. Geophys. Res., 85,* 4398-4404.

Kantha, L.H., 1980. Experimental simulation of the 'retreat' of the seasonal thermocline by surface heating. In *Fjord Oceanography*, edited by H.J. Freeland, D.M. Farmer and C.D. Levings, Plenum Press, 197-204.

Kantha, L.H., 1980. Laboratory experiments on attenuation of internal waves by turbulence in the mixed layer. *Second International Symposium on Stratified Flows*, Trondheim, Norway, edited by T. Carstens and T. McClimans, 731-741.

Kantha, L.H., 1980. Turbulent entrainment at a buoyancy interface due to convective turbulence. In *Fjord Oceanography*, edited by H.J. Freeland, D.M. Farmer and C.D. Levings, Plenum Press, 205-214.

Kantha, L.H., R.R. Long, 1980. Turbulent mixing with stabilizing surface buoyancy flux. *Phys. Fluids 23,* 2142-2143.

Kantha, L.H., 1979. On generation of internal waves by turbulence in the mixed layer. *Dynamics of Atmospheres and Oceans 3,* 39-46.

Kantha, L.H., 1979. On leaky modes on a buoyancy interface. *Dynamics of Atmospheres and Oceans 3,* 47-54.

Kantha, L.H., 1979. Drift currents induced by reflection of propagating inertial and internal waves at a rigid boundary. *Dynamics of Atmospheres and Oceans 4,* 15-20.

Marsh, B.D. and L.H. Kantha, 1978. On the heat and mass transfer from an ascending magma. *Earth and Planetary Science Letters 39*, 435-443.

Kantha, L.H., 1977. Note on the role of internal waves in thermocline erosion. In *Modelling and Prediction of the Upper Layers of the Ocean,* edited by E.B. Kraus, Pergamon Press, 173-177.

Kantha, L.H., O.M. Phillips and R.S. Azad, 1977. On turbulent entrainment at a stable density interface. *J. Fluid Mech. 79*, 753-768.

Kantha, L.H., W.S. Lewellen and F.H. Durgin, 1972. Response of a trailing vortex to axial injection into the core. *AIAA J. of Aircraft, 9*, 254-256.

PATENTS

Clayson, Carol Anne; and Kantha, Lakshmi, granted 31 August 2010. "Systems and methods for determining turbulence and turbulent mixing in the free atmosphere". *US Patent* 7788035.

Kantha, L. and C. A. Clayson, September 2011. Turbulence locations and intensities in the atmosphere from radio occultation soundings. *Provisional International Patent*.

PUBLICATIONS (IN THE PIPELINE)

Lawrence, D., Doddi, A. and L. Kantha, 2020. A technique for estimating of TKE dissipation rate and temperature structure function parameter using UAV-borne, high frequency response Pitot tube and Cold Wire sensors (Being written)

Kantha, L., 2020. A note on rain-formed fresh water lenses in tropical and subtropical oceans (To be submitted to *J. Phys. Oceanogr.*)

Kantha, L., H. Luce, D. Lawrence, H. Hashiguchi, M. Yabuki and T. Tsuda, 2020. On humidity gradient sheets between a cloud top and a dry layer intruding above. (To be submitted to *J. Atmos. Sci.*)

Kantha, L., 2019. *Aerospace Propulsion, Rockets and Aircraft Engines: Principles and Practice* (to be readied for publication in 2020, hopefully)

PUBLICATIONS/PROCEEDINGS/PRESENTATIONS/SEMINARS/POSTERS/TALKS (NOT REFEREED)

Doddi, A., D. Lawrence, H. Luce, L. Kantha, G. de Beer and H. Hashiguchi, 2019. Reliable wind vecrtor estimation for scientific analysis of atmospheric measurements by small unmanned aerial systems. Poster presented at AGU Fall Meeting, San Francisco.

Mixa, T., K. Bossert, D. C. Fritts, B. Laughman, T. Lund and L. Kantha, 2018. Characterizing high frequency gravity wave propagation through an evolving inertial wave in the MLT, *EGU General Assembly Conference* Abstracts 20, 11394

Kantha, L., J. Raju and H. Rahaman, 2018. Modeling mixing in the upper layers of the Bay of Bengal. *2018 Ocean Sciences Meeting*, Portland, OR, Feb. 12, 2018.

Doddi A, D. A. lawrence, J. Farnsworth J, L. Kantha, 2018. Atmospheric Turbulence Measurements Using Small Unmanned Aircraft Systems. *ISARRA 2018*, International Society for Atmospheric Research using Remotely Piloted Aircraft), July 10, 2018.

Mixa, T., K. Bossert, D. C. Fritts, B. Laughman, T. Lund and L. Kantha, 2017. Demystifying the complexities of gravity wave dynamics in the Middle Atmosphere: A road map to improved weather forecasts through high-fidelity modeling, *AGU Fall Meeting*, December 2017.

Mixa, T., K. Bossert, D. C. Fritts, B. Laughman, T. Lund and L. Kantha, 2017. Diagnosing High Frequency Gravity Wave Influences in the MLT through Modeling and Observation, *AGU Fall Meeting*, December 2017.

Mixa, T., D. Fritts, K. Bossert, B. Laughman, L. Wang, T. Lund and L. Kantha, 2017. Gravity Wave Interactions with Fine Structures in the Mesosphere and Lower Thermosphere, *EGU General Assembly Conference* Abstracts 19, 11213

Mixa, T., D. C. Fritts, B. Laughman, L. Wang, T. Lund and L. Kantha, 2016. Fine Structure Influences on Gravity Wave Propagation in the Mesosphere and Lower Thermosphere, *AGU Fall Meeting*, December 2016.

Mixa, T., D. C. Fritts, B. Laughman, L. Wang and L. Kantha, 2015. Direct Numerical Simulations of Small-Scale Gravity Wave Instability Dynamics in Variable Stratification and Shear, *AGU Fall Meeting*, December 2015.

Kantha, L. et al., 2017a. Shigaraki UAV-Radar Experiment (ShUREX): Probing turbulent structures in the lower troposphere. Invited Atmospheric Sciences Seminar, *Research Institute for Sustainable Humanosphere,* Kyoto University, Japan. June 9, 2017.

Kantha, L. et al., 2017b. Shigaraki UAV-Radar Experiment (ShUREX): Probing turbulent structures in the lower troposphere. Invited keynote presentation at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 30, 2017.

Kantha, L. et al., 2017c. Turbulent mixing in the oceans and the atmosphere. Invited Seminar at *Japan Agency for Marine Sciences and Technology*, Tokyo, Japan. May 26, 2017.

Kantha, L., 2017d. Shigaraki UAV-Radar Experiment (ShUREX): Probing turbulent structures in the lower troposphere. *2017 Japan Geoscience Union Meeting*, Tokyo, Japan. May 25, 2017.

Kantha, L., 2017e. Estimating eddy diffusivities in the ocean. Invited keynote presentation, *2017 Japan Geoscience Union Meeting*, Tokyo, Japan. May 21, 2017.

Luce, H., L. Kantha, H. Hashiguchi, D. Lawrence, M. Yabuki and T. Tsuda, 2017. Comparisons between TKE dissipation rates estimated from MU radar and UAV-borne Pitot data during ShUREX 2016 campaign. Keynote Talk presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., M. Yabuki, H. Hashiguchi and L. Kantha, 2017a. Deep in-cloud Kelvin-Helmholtz billows observed simultaneously by the MU radar, fisheye camera and two lidars. Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., L. Kantha, H. Hashiguchi, N. Nishi, D. Lawrence, M. Yabuki and T. Tsuda, 2017b. A detailed analysis of steep humidity gradients above a turbulent cloud top using MU radar, UAV and balloon measurements. Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., L. Kantha, H. Hashiguchi, M. Yabuki, T. Tsuda, D. Lawrence and T. Mixa, 2017c. Comparisons between high-resolution profiles of squared refractive index gradient M^2 estimated from MU radar and UAV data collected during the ShUREX 2015 campaign. Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., L. Kantha, H. Hashiguchi, M. Yabuki, T. Tsuda, D. Lawrence and T. Mixa, 2017d. Concurrent MU radar, UAV and balloon observations of temperature and moisture fine-scale structure during the ShUREX 2015 campaign. Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., H. Hashiguchi, L. Kantha, D. Lawrence, T. Mixa, T. Tsuda and M. Yabuki, 2017e. Evaluation of the performance of the radar imaging technique using small UAVs as hard targets during ShUREX campaigns (2015-2016). Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., L. Kantha, H. Hashiguchi, D. Lawrence, M. Yabuki, T. Tsuda and T. Mixa, 2017f. Comparisons between high-resolution profiles of squared refractive index gradient M^2 measured by the Middle and Upper Atmosphere radar and unmanned aerial vehicles (UAVs) during the Shigaraki UAV-Radar Experiment 2015 campiagn. EGU March 2017.

Wilson, R., H. Hashiguchi, L. Kantha, D. Lawrence, T. Mixa, M. Yabuki, H. Luce and T. Tsuda, 2017f. Turbulence measurements from UAV and meteorological balloons: a comparison. Poster presented at *MST15/EISCAT18 Meeting*, NIPR, Tokyo, Japan. May 29-30, 2017.

Luce, H., R. Wilson, F. Truchy, H. Hashiguchi, M. K. Yamamoto, M. Yamamoto, L. Kantha (2014). Turbulence scales and energetics in clear air and clouds evaluated from MU radar and balloon measurements. 14th International Workshop on Technical and Scientific Aspects of MST14/IMST1, May 2014, Sao Jose dos Campos, Brazil.

Luce, H., R. Wilson, F. Dalaudier, F. Truchy, H. Hashiguchi, M. K. Yamamoto, M. Yamamoto, L. Kantha (2014). Estimating the length scales for tropospheric turbulence from MU radar and balloon data. 14th International Workshop on Technical and Scientific Aspects of MST14/IMST1, May 2014, Sao Jose dos Campos, Brazil.

Schaefer, B., C. Brechtel, J. Crowley, B. Michaels, S. Muir, C. Pulido, D. Reid, E. Russel, E. Threet, S. Tozer, L. Kantha and J. Tanner (2014). Overview of the University of Colorado at Boulder Hybrid Sounding Project. 50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference. DOI:10.2514/6.2014-3869.

Kantha, L., T. Tsuda, M. Yamamoto, H. Hashiguchi and T. Mixa. 2014. Atmospheric Turbulence: Cosmic Radio Occultations and MST Radars. Eighth FORMOSAT-3/COSMIC Data Users' Workshop, NCAR, Boulder, USA, October 1, 2014.

Kantha, L., T. Tsuda, M. Yamamoto, H. Hashiguchi and T. Mixa. 2014. Cosmic Radio Occultations and MST Radars. AOGS Annual Meeting, Sapporo, Japan, July 29, 2014.

Kantha, L. 2013. Synergistic use of MST radars, radiosondes and radio occultations in identifying and quantifying turbulence in the free atmosphere, Proceedings of the 7th Symposium on MUR and EAR, Kyoto University.

Carniel S., Sclavo M. and L. Kantha, 2011. Double-diffusive layers in the Adriatic Sea. Marine Research at CNR 2011 (CNR Ed.), ISBN-2239-5172,1569-1575.

Sclavo M., Carniel S. and L. Kantha, 2011. Quantifying the Stokes dissipation wave energy in the global ocean: preliminary results. Marine Research at CNR 2011 (CNR Ed.), ISBN-2239-5172, 1577-1581

Clayson, C. A., L. Kantha and S. Carniel, 2004. A non-local second moment closure model applied to convective boundary layers. Extended Abstract, AMS Meeting on Boundary Layers, Portland, Maine, Aug 9-14, 2004.

Clayson, C. A., S. Carniel, and L. Kantha, 2004. A generic two-equation turbulence model for geophysical applications. Extended Abstract, AMS Meeting on Boundary Layers, Portland, Maine, Aug 9-14, 2004.

Carniel, S., L. Kantha, and M. Sclavo, 2003, The influence of Langmuir cells on the velocity structure in the mixed layer, Proc. Workshop on Waves and Operational Oceanography, Brest, France, June 23-24, 2003.

Kantha, L., S. Carniel, and P. Franchi, 2002, A real-time nowcast-forecast system in the Ligurian Sea. In The GOATS/MEANS 2000 Experiment, ed. E. Bovio, NATO SACLANT Undersea Research Centre, La Spezia, Italy.

Kantha, L. H., 2002. Ocean Mixed Layer, in Proc. European Union CARTUM project.

Schaudt, K. J., G.Z. Forristall, L. H. Kantha, R. Leben, J.K. Choi, P. Black, E. Uhlhom, N. L. Guinasso, Jr., J. N. Walpert, F. J. Kelly, S. F. DiMarco, O. Wang, S. Anderson, and P. Coholon, 2001, A look at currents in the Gulf of Mexico in 1999-2000, Offshore Technology Conference (OTC'01), 2001, Houston, TX

Kantha, L. H., J.-K. Choi, R. Leben, C. Cooper, M. Vogel, and J. Feeney, 1999. Hindcasts and real-time nowcast/forecasts of currents in the Gulf of Mexico, Offshore Technology Conference, May 3-6, 1999, Houston, TX.

Kantha, L. H., 1999. Monitoring the oceans using data-assimilative models: Implications for integrated in-situ and remote observing systems, Abstract, 3rd Symposium on Integrated Observing Systems, 79th AMS Annual Meeting, January 11-15, 1999, Dallas, TX.

Clayson, C. A., A. Chen, L. H. Kantha, and P. J. Webster, 1997. Numerical simulations of the equatorial Pacific during the TOGA/COARE IOP, Abstract, 22nd Conference on Hurricanes and Tropical Meteorology, May 19-23, 1997, Fort collins, CO, 600-601.

Pontius, P. E., L. H. Kantha, V. Anantharaj and T. J. Bennett, Jr., 1994. Tidal modeling in marginal and semi-enclosed seas. The 1994 *Marine Technology Society* Meeting Proceedings, 221-228.

Horton, C. , M. Clifford, D. Cole, J. Schmitz and L. Kantha, 1991. Water circulation modeling for the Persian Gulf. The 1991 *Marine Technology Society* Meeting Proceedings, 557-560.

Kantha, L., K. Whitmer and G. Born, 1994. Inverse barometer effect in altimetry: A study in the north Pacific. *TOPEX/Poseidon Research News, 2*, 18-23.

Ly, N. L. and L. H. Kantha, 1991. Hurricane Camille shelf wave simulation using a numerical circulation model. *Estuarine and Coastal Modeling*, Second Int'l Conf., Tampa, Florida, Nov. 13- 15, 1991, 586-593.

Blumberg, A.F., L.H. Kantha, H.J. Herring and G.L. Mellor, 1985. A hindcast of the circulation in the Santa Barbara Channel during Spring 1983. Proceedings of the Symposium on "*Applications of Real-time Oceanographic Circulation Modelling*", at Applied Physics Laboratory, The Johns Hopkins University, May 23-24, 1985.

Blumberg, A.F., H.J. Herring, G.L. Mellor, 1985. 3-D orthogonal curvilinear circulation modelling. Proceedings of the 1985 *ASCE Hydraulics Division Speciality Conference*, Orlando, Florida, August 12-17, 1985, 1088-1094.

Long, R.R. and L.H. Kantha, 1978. The rise of a strong inversion caused by heating at the ground. Proceedings of the *Twelfth Symposium on Naval Hydrodynamics*, Washington, D.C.

MULTIMEDIA DOCUMENTS

Kantha, L. H., T. Kinder, R. Beach and J. Martin, 2000. Nearshore Prediction Workshop, Final Report (www.saclantc.nato.int/WSNearShore)

Rojsiraphisal, T. and L. Kantha, 2005-. The North Indian Ocean Simulation/Hindcast and Nowcast/Forecast Site (ocean.colorado.edu/nio/ nio.htm)

Kantha, L. H., and J.-K. Choi, 1997-. Real Time Nowcast/Forecasts in the Gulf of Mexico (ocean.colorado.edu/~jkchoi/gomforecast.html)

Kantha, L. H., D. M. Beitzell, S. L. Harper and R.R. Leben, 1994-. Altimetry in marginal, semi-enclosed and coastal seas. Part I: Marginal and semi-enclosed seas. Colorado Center for Astrodynamics Research Report, University of Colorado, Boulder. (www.cast.msstate.edu/Altimetry).

Kantha, L. H., P. E. Pontius and V. Anantharaj, 1994-. Tidal models of marginal, semi-enclosed and coastal seas. Part I: Sea surface height. Colorado Center for Astrodynamics Research Report, University of Colorado, Boulder (www.cast.msstate.edu/Tides2D).

Kantha, L. H., and S. Piacsek, 1993-. Ocean Models. In Computational Science Education Project. Dept. of Energy Electronic Book, 273-361 (csep1.phy.ornl.gov/csep.html).

TEACHING EXPERIENCE

Rocket and Spacecraft Propulsion, graduate level course, 2000 - (enrollment ~15-45)
Aircraft Propulsion, graduate level course (biannual) , 2015 - (enrollment ~10-23)
Gas Turbine Propulsion, graduate level course, 2004-2009 (enrollment 3-7)
Foundations of Aerospace Propulsion, required undergraduate course, 2001- 2010, 2016 (enrollment ~50-80)
Introduction to Thermodynamics and Aerodynamics, required undergraduate course, 2011-2012 (enrollment ~ 100-110)
Computational Fluid Dynamics, undergraduate/graduate level course, 1991-1998 (enrollment 10 to 68)
Fluid Mechanics, graduate level course, 1999-2003 (enrollment ~12)
Ocean Modeling, graduate level course, 1992-1996 (enrollment 3-10)
Small Scale Processes, graduate level course, 1992-1997 (enrollment 3-11)

STUDENTS SUPERVISED

Masters Level Graduate Students - 12
Ph. D. Level Graduate Students - 12
Thesis Committees Served On - 22
Masters Degrees Awarded - 8
Ph. D. Degrees Awarded - 12
1. Dr. Denise Tremblay (1993) - Co-chair
2. Dr. Carol Anne Clayson (1994) - Co-chair
3. Dr. Gary Wick (1994) - Co-chair
4. Dr. Douglas Engelhardt (1996) - Co-chair
5. Dr. Cindy Willett (1997) - Co-chair
6. Dr. Craig Tierney (1998) - Co-chair
7. Dr. Joseph Lopez (1998)
8. Dr. Mark Potts (1998)
9. Dr. Scott Stewart (2000)
10. Dr. Sandro Carniel (2003 at University of Venice, Italy) – Co-chair
11. Dr. Thaned Rojsiraphisal (2007)
12. Mr. Tyler Mixa (present)

REVIEWER (All Years)

Journal of Fluid Mechanics, Journal of Physical Oceanography, Journal of Geophysical Research (Oceans and Solid Earth), Journal of Geophysical Research (Atmosphere), Geophysical Research Letters, Deep Sea Research, Science, Nature, Journal of Atmospheric and Oceanic Technology, Tellus, Monthly Weather review, Ocean Modelling, Journal of Marine Research, Ocean Dynamics, Ocean Engineering, Geoscience Letters, Environmental Fluid Mechanics, Journal of Oceanography

NSF, ONR, NASA, NOAA, NERC and other agency proposals