CURRICULUM VITAE
TONG (TONY) LEE

MS 300-323, Jet Propulsion Laboratory
4800 Oak Grove Drive, Pasadena, CA 91109
ORCID: 0000-0001-9817-2908

Voice: (818) 354-1401 Fax: (818) 354-0966
E-mail: Tong.Lee@jpl.nasa.gov

BIO

Tong Lee is a physical oceanographer with primary research expertise in the variability and physical processes of the ocean and their relationships with climate variability and water cycle using satellite in conjunction with in-situ observations, models, and data assimilation.

Lee has made significant contributions to broad areas of ocean/climate research, especially in satellite oceanography. He has published some of the pioneering papers on El Niño-Southern Oscillation (ENSO) diversity, teleconnections, and impacts. He pioneered the applications of satellite salinity measurements to advance the understanding of oceanic physical processes and ocean-water cycle linkages. His works on decadal variability of sea level and ocean circulations were among the earliest satellite-based studies of decadal variability in the ocean. He has a Web-of-Science H-Index of 38, Google Scholar H-Index of 47 and i10-Index of 119.

Lee's research has benefited ocean observing system design and development. His theoretical decomposition of meridional overturning circulation (MOC) into various dynamical components established the physical basis for the design and development of the in-situ monitoring systems of MOCs in the subtropical and subpolar North Atlantic as well as the South Atlantic. His research on the horizontal structure of shallow MOC in the Pacific Ocean has spurred the development of the monitoring systems for low-latitude western boundary currents in the northern and southern tropical Pacific, and impacted the design of the Tropical Pacific Observing System-2020.

Lee has also contributed significantly to NASA satellite mission efforts. He served as Project Scientist of NASA's Aquarius satellite mission and the principal architect and writer of Science Section of the Aquarius mission extension proposal. He is the lead of NASA's Ocean Salinity Science Team to advance salinity science and develop concepts for future salinity missions. He is the project lead for NASA Salinity Continuity Project beyond Aquarius Phase-F to extend NASA salinity record using measurements from NASA's SMAP satellite. He is serving as the Project Scientist of a NASA Earth Venture Mission-3 proposal to measure mesoscale air-sea exchanges of heat and moisture. He co-leads the NASA Science Working Group for the DoD-sponsored STP-H8 satellite mission for wind and precipitation measurements. He is leading a JPL project to develop a miniaturized upward-looking microwave sounder to profile atmospheric boundary layer from ocean-surface autonomous platforms that can enhance satellite cal/val. He is funded PI for NASA's Ocean Vector Science Team and Sea Level Change Science Team.

Lee was one of the principals of the Estimating the Circulation and Climate of the Ocean (ECCO) Consortium (https://ecco-group.org/). He developed the first basin-scale ocean state estimation system using the adjoint method based on NOAA/GFDL model prior to ECCO, and an adjoint-based global ocean state estimation system at JPL based on a version of the MITgcm model that resolved tropical ocean dynamics. He has been leading a JPL project on improving time-varying hydrological and cryospheric forcings in the ECCO system. He is also a principal of a joint NASA-NOAA project on improving services to the community for sea level prediction and projection by leveraging on ECCO.

Lee has served in numerous committees and panels for international and domestic research programs to foster collaborative community research and observing system design and developments, serving various leadership roles including those within the US and International Climate Variability and Predictability (CLIVAR) programs, US Atlantic MOC Program, OceanObs'19 decadal ocean observing program, and Committee on Space Research (COSPAR) program.

RESEARCH INTERESTS

General interest: physical oceanography and linkages of the ocean with the water cycle, climate

variability, and weather.

Specific foci: intraseasonal-to-decadal variability; ENSO diversity and teleconnections/impacts; upper-ocean heat and salt budgets; meridional overturning circulation and heat transports; Indo-Pacific circulations and their linkages; ocean remote sensing; data assimilation.

PROFESSIONAL EXPERIENCE

- Jet Propulsion Laboratory:
    - Supervisor, Ocean Circulation and Air-Sea Interaction Group (2015-present)
    - Project Scientist for Aquarius satellite mission (2013-2017)
    - Supervisor, Oceans and Ice Group (2011-2015)
    - Principal Scientist (2006-present); Scientist (1996-2006)
- University of California Los Angeles, Joint Institute for Regional Earth System Science and Engineering (JIFRESSE): Project Scientist (2015-present); Visiting Researcher (2012-2014)
- Massachusetts Institute of Technology: Postdoctoral Research Associate (1994-1996)

EDUCATION

- Ph.D. in Oceanography, 1994, University of Rhode Island, Kingston, RI.
- M.S. in Marine Studies, 1989, University of Delaware, Newark, DE.
- B.S. in Mechanics, 1984, Sun Yat-Sen University, Guangzhou, P.R. China.

PEER-REVIEWED PUBLICATIONS

(including six book chapters indicated by * and an Editorial denoted by **)

2021:

135: Delman, A. and **Lee, T.**, 2021: Global Contributions of Mesoscale Dynamics to Meridional Heat Transport. Ocean Sci., in review.

134. Wouter, D. and co-authors (incl. T. Lee), 2021: Consistent monitoring of global water cycle variability across scales: where do we stand? Bull. Amer. Meteorol. Soc., in review.

132. Chandanpurkar, H., **T. Lee**, X. Wang, et al., 2021: Influence of nonseasonal river discharge on sea surface salinity and height. J. Adv. Model. Earth Sys., in revision.

133. Johnson, J. and co-authors (incl. T. Lee), 2021: Microwave Radiometry at Frequencies from 500 to 1400 MHz: An Emerging Technology for Earth Observations. Proceedings of the IEEE, revision in review.

131. Yu, L, F. Bingham, E. Dinnat, S. Fournier, **T. Lee**, and O. Melnichenko, 2021: Revisiting the Global Patterns of Seasonal Cycle in Sea Surface Salinity. J. Geophys. Res., revision in review.

130. Ummenhofer, C.C., S.A. Murty, J. Sprintall, **T. Lee**, and N.J. Abram, 2021: Recent heat and freshwater changes over the Indian Ocean region: variability, trends and mechanisms. Nature Rev. Earth & Environ., revision in review.

129. Fournier, S. and Lee, T., 2021: Seasonal and interannual variability of sea surface salinity near major river mouths of the world ocean inferred from gridded satellite and in-situ salinity products. Remote Sensing. *doi.org/ 10.3390/rs13040728.*

2020:

128. Dzwonkowski, B., J. Coogan, S. Fournier, G. Lockridge, K. Park, and **T. Lee**, 2020: Compounding impact of severe weather events fuels marine heatwave in the coastal ocean. Nature Comm., 11, 4623. https://doi.org/10.1038/s41467-020-18339-2.

*127. McPhaden, M.J., **T. Lee**, S. Fournier, and M.A. Balmaseda, 2020: ENSO Observations, Chpt.3 in: "*El Niño Southern Oscillation in a Changing Climate"*, M. J. McPhaden, A. Santoso, and W. Cai, Eds. AGU Geophysical Monograph Series, ISBN: 978-1-119-54812-6. 528pp. Wiley, Hoboken NJ. https://doi.org/10.1002/9781119548164.ch3

126. Beal, L. and co-authors (incl. T. Lee), 2020: A roadmap to IndOOS-2: Better observations of the rapidly-warming Indian Ocean. Bull. Amer. Meteorol. Soc., 1-50, https://doi.org/10.1175/BAMS-D-19-0209.1.

125. Delman, A. and **T. Lee**, 2020: A new method to assess mesoscale contributions to meridional heat transport in the North Atlantic Ocean. Ocean Sci., 16, 979–995, https://doi.org/10.5194/os-16-979-2020.

124. Gentemann, C., C.A. Clayson, S. Brown, **T. Lee**, R. Parfitt, J.T. Farrar, M. Bourassa, P.J. Minnett, H. Seo, S.T. Gille, and V. Zlotnicki, 2020: FluxSat: Measuring the ocean-atmosphere turbulent exchange of heat and moisture from space. Remote Sensing. *12*(11), 1796; https://doi.org/10.3390/rs12111796

123. Fournier, S., **T. Lee**, X. Wang, T.W.K. Armitage, O. Wang, I. Fukumori, and R. Kwok, 2020: Sea surface salinity as a proxy for Arctic Ocean freshwater changes. J. Geophys. Res., DOI: 10.1029/2020JC016110.

122. Yu, L., S. Josey, F. Bingham, and **T. Lee**, 2020: Intensification of the Global Water Cycle and Salinity Evidence: A Synthesis Review. Ann. New York Aca. Sci., https://doi.org/10.1111/nyas.14354.

121. Reul, N and co-authors (incl. T. Lee), 2020: Sea Surface Salinity estimates from Spaceborne L-band radiometers: an overview of the first decade of observation (2010-2019). Remote Sensing of Env., vol 242, 111769, https://doi.org/10.1016/j.rse.2020.111769.

2019:

120. Fournier, S., **T. Lee**, W. Tang, M. Steele, E. Omeldo, 2019: Evaluation and Intercomparison of SMOS, Aquarius and SMAP Sea Surface Salinity Products in the Arctic Ocean. Remote Sensing. 11, 3043; doi:10.3390/rs11243043.

119. Speich, S., **T. Lee, F. Muller-Karger, and L. Lorenzoni et al., 2019: Editorial: OceanObs'19: An Ocean of Opportunity. Front. Mar. Sci., https://doi.org/10.3389/fmars.2019.00570.

118. Sloan, B. and co-authors (incl. T. Lee), 2019: Evolving the global ocean observing system for research and application services through international coordination. Frontiers in Mar. Sci., DOI:10.3389/fmars.2019.00449.

117. Hermes, J.C. and co-authors, 2019: A sustained ocean observing system in the Indian Ocean for climate related scientific knowledge and societal needs. Frontiers in Mar. Sci. https://doi.org/10.3389/fmars.2019.00355.

116. Melnichenko, O., P. Hacker, F. Bingham, **T. Lee**, 2019: Patterns of SSS variability in the eastern tropical Pacific: intra-seasonal to inter-annual time-scales from seven years of NASA satellite data. Oceanogr., https://doi.org/10.5670/oceanog.2019.208.

115. Palmer M.D. and co-authors (incl. T. Lee), 2019: Adequacy of the ocean observation system for quantifying regional heat and freshwater storage and change. Frontiers Mar. Sci., DOI:10.3389/fmars.2019.00416

114. Foltz, G.R. and co-authors, 2019: The tropical Atlantic Observing System. Frontiers Mar. Sci., https://doi.org/10.3389/fmars.2019.00206.

113. **Lee, T.**, S. Fournier, A. L. Gordon, J. Sprintall, 2019: Maritime continent water cycle regulates low-latitude chokepoint of global ocean circulation. Nature Comm., 10, 2013 (2019), DOI:10.1038/s41467-019-10109-z.

112. Vinogradova, N., **T. Lee**, J. Boutin, et al., 2019: Satellite salinity observing system: recent discoveries and the way forward. Frontiers Mar. Sci., https://doi.org/10.3389/fmars.2019.00243.

111. Hasson, A., J.T. Farrar, J. Boutin, F. Bingham, and **T Lee**, 2019: Intraseasonal variability of surface salinity in the eastern tropical Pacific associated with mesoscale eddies. J. Geophys. Res., DOI: 10.1029/2018JC014175.

110. Fu, L.-L., **T. Lee**, W.T. Liu, R. Kwok, 2019: Fifty years of Satellite Remote Sensing of the Ocean. Meteorological Monographs, 59, 5.1–5.46, https://doi.org/10.1175/AMSMONOGRAPHS-D-18-0010.1.

2018:

109. Olmedo, E., C. Gabarro, J. Ballabrera-Poy, V. Gonzalez-Gamau, J. Martinez, A. Turiel, M. Portabella, S. Fournier, and **T. Lee**, 2018: Seven years of SMOS Sea Surface Salinity at high latitudes: SSS variability in Arctic and sub-Arctic regions. Remote Sens., 10(11):1772. DOI: 10.3390/rs10111772.

108. Delman, A., **T. Lee**, and B. Qiu, 2018: Interannual and decadal forcing of mesoscale eddy kinetic energy in the subtropical southern Indian Ocean. J. Geophys. Res., 123, 8180-8202, DOI: 10.1029/2018JC013945, November, 2018.

107. Le Vine, D. M., E. Dinnat, T. Meissner, F. Wentz, H.-Y. Kao, G. Lagerloef, and **T. Lee**, 2018: Status of Aquarius and salinity continuity. Remote Sens., 10(10):1585, DOI: 10.3390/rs10101585.

106. Kao, H.-Y., G. Lagerloef, **T. Lee**, O. Melnichenco, T. Meissner, and P. Hacker, 2018: Assessment of Aquarius sea surface salinity data using Aquarius Validation Data System (AVDS) and other statistical methods. Remote Sens., 10(9):134, DOI:10.3390/rs10091341.

*105. **Lee, T.**, and C. Gentemann, 2018: Satellite SST and SSS observations and their roles to constrain ocean models. In "New Frontiers in Operational Oceanography", E. Chassignet, A. Pascual, J. Tintoré, and J. Verron, Eds., GODAE OceanView, 271-288, doi:10.17125/gov2018.ch11

104. Tang, W., S. Yueh, D. Yang, A. Fore, A. Hayashi, **T. Lee**, S. Fournier, and B. Holt, 2018: The Potential and Challenges of Using Soil Moisture Active Passive (SMAP) Sea Surface Salinity to Monitor Arctic Ocean Freshwater Changes. Remote Sens., 1*0*, 869; https://doi.org/10.3390/rs10060869.

103. Li, J., E. Suhas, W. Lee, M. Richardson, Y. Wang, J. Yu, **T. Lee**, E. Fetzer, G. Stephens, and M.H. Shen, 2018: The Impacts of Bias in Cloud-Radiation-Dynamics Interactions on Central-Pacific Seasonal and El Nino Simulations in Contemporary GCMs. J. Geophys. Res., DOI:10.1002/2017EA000304.

2017:

102. Fournier, S., J. Vialard, M. Lengaigne, **T. Lee**, M.M. Gierach, and A.V.S. Chaitanya, 2017: Modulation of the Ganges-Brahmaputra river plume by the Indian Ocean Dipole and eddies inferred from satellite observations. J. Geophys. Res., *122. https://doi.org/10.1002/2017JC013333*.

101. Fournier, S., D. Vandemark, L. Gautier, **T. Lee**, B. Jonsson, and M.M. Gierach, 2017: Interannual variation in offshore advection of Amazon-Orinoco plume waters: observations, forcing mechanisms, and impacts. J. Geophys. Res., *122. https://doi.org/10.1002/2017JC013103*.

100. Tang, W., A. Fore, S. Yueh, **T. Lee**, A. Hayashi, A. Sanchez-Franks, B. King, D. Baranowski, and J. Martinez, 2017: Validating SMAP SSS with in-situ measurements. Remote Sensing Environ.. https://doi.org/10.1016/j.rse.2017.08.021.

*99. **Lee, T.**, J.T. Farrar, and S. Arnault, et al. 2017: Monitoring and interpreting the tropical oceans by satellite altimetry. Chapter 7 in satellite altimetry textbook "Satellite Altimetry Over Ocean and Land Surfaces", Editors D. Stammer and A. Cazenave, CRC Press, Taylor and Francis Group. 644pp, ISBN 9781498743457. https://doi.org/10.1201/9781315151779.

98. Li, Y., W. Han, M. Ravichandran, W. Wang, T. Shinoda, and **T. Lee**, 2017: Bay of Bengal Salinity Stratification and Indian Summer Monsoon Intraseasonal Oscillation: 1. Variability and causes. J. Geophys. Res., 122, 4291–4311. DOI: 10.1002/2017JC012691.

97. Yu, L., X. Jin, S. Josey, **T. Lee**, A. Kumar, C. Wen, and Y. Xue, 2017: The global water cycle from atmospheric reanalysis, satellite, and ocean salinity. J. Clim. 30, 3829–3852. DOI: http://dx.doi.org/10.1175/JCLI-D-16-0479.1.

96. Bingham, F., and **T. Lee**, 2017: Space and time scales of sea surface salinity and freshwater forcing variability in the global ocean (60S-60N). J. Geophys. Res., DOI: 10.1002/2016JC012216. Apr. 2017.

95. Li, Y., W. Han, M. Ravichandran, W. Wang, T. Shinoda, and **T. Lee**, 2017: Bay of Bengal Salinity Stratification and Indian Summer Monsoon Intraseasonal Oscillation: 2. Impact on SST and convection. J. Geophys. Res., 122*,* 4312–4328. DOI: 10.1002/2017JC012692.

94. Xue, Y. and co-authors (incl. T. Lee), 2017: A Real-time Ocean Reanalyses Intercomparison Project in the content of in the context of Tropical Pacific Observing System and ENSO monitoring. Clim. Dyn. DOI: 10.1007/s00382-017-3535-y.

93. McGregor, S., A. Sen Gupta, D. Dommenget, **T. Lee**, M.J. McPhaden, and K.S. Kessler, 2017: Factors influencing the skill of synthesised satellite wind products in the tropical Pacific. J. Geophys. Res., DOI: 10.1002/2016JC012340.

2016:

92. Wickert, J. E. and co-authors (incl. T. Lee), 2016: GEROS-ISS: GNSS REflectometry, Radio Occultation and Scatterometry onboard the International Space Station. IEEE Trans. Geosci. Remote Sens., Vol. 9, Issue 10, 4552-4581, DOI: 10.1109/JSTARS.2016.2614428.

91. Li, Z., C. Zuffada, S.T. Lowe, **T. Lee**, V. Zlotnick, 2016: Analysis on GNSS-R Altimetry for Mapping Ocean Mesoscale Sea Surface Heights Using High-Resolution Model Simulations. IEEE JSTAR, Vo.9, Issue 10, 4631-4642, DOI: 10.1109/JSTARS.2016.2581699.

90. Kwok, R., J.C. Comiso, **T. Lee**, and P.R. Holland, 2016: Linked trends in sea ice edge and Southern Oscillation Index in the Pacific sector of the Southern Ocean: 1982-2013. Geophys. Res. Lett., 43, doi:10.1002/2016GL070655.

89. Fournier, S., J.T. Reager, and **T. Lee** et al., 2016: SMAP observes flooding from land to sea: The Texas event of 2015. Geophys. Res. Lett., 43, 10.1002/2016GL068822.

88. Boutin, J. and co-authors (incl. T. Lee), 2016: Satellite and in situ salinity: understanding near surface stratification and sub-footprint variability. Bull. Amer. Meteorol. Soc., Vol.97, Issue 8, 1391-+, DOI: 10.1175/BAMS-D-15-00032.1.

87. Fournier, S., **T. Lee**, and M. Gierach, 2016: Seasonal and interannual variations of sea surface salinity associated with the Mississippi River plume observed by SMOS and Aquarius. Remote Sensing. Environ. 180, 431-439.

86. Li, J.-L. F., Y.-H. Wang, and **T. Lee**, et al., 2016: The Impacts of Precipitating Cloud Radiative Effects on Ocean Surface Evaporation, Precipitation, and Ocean Salinity in Coupled GCM Simulations. J. Geophys. Res. – Atmos., 121, doi:10.1002/2016JD024911.

85. **Lee, T.** 2016: Consistency of Aquarius sea surface salinity with Argo products on various spatial and temporal scales. Geophys. Res. Lett., 43, 10.1002/2016GL068822.

84. Kidwell, A., **T. Lee**, Y.-H. Jo, and X.-H. Yan, 2016: Characterization of the variability of the South Pacific Convergence Zone using satellite and reanalysis wind products. J. Clim. 29, 1717-1732. DOI: 10.1175/JCLI-D-15-0536.1.

83. Durack, P.J., **T. Lee**, N. Vinogradova, D. Stammer, 2016: Keeping the lights on for global ocean salinity observations. Nature Climate Change. 3, 2228-231. https://doi.org/10.1038/nclimate2946.

2015:

82. Llovel, W., and **T. Lee**, 2015: Importance and origin of halosteric contribution to sea level change in the southeast Indian Ocean during 2005-2013. 42, 1148-1157, Geophys. Res. Lett., DOI: 10.1002/2014GL062611. Feb. 2015.

81. Song, Y.T., **T. Lee**, J.-H. Moon, et al., 2015: Modeling skin-layer salinity: focus on seasonal variability and global means. J. Geophys. Res., 120, 1079–1095. DOI:10.1002/2014JC010346.

80. Halkides, D.J., D.E. Waliser, **T. Lee**, et al., 2015: Quantifying the processes controlling intraseasonal mixed-layer temperature variability in the tropical Indian Ocean. J. Geophys. Res., 120, 692-715. DOI: 10.1002/2014JC010139.

79. Li, Y., W. Han, and **T. Lee**, 2015: Intraseasonal Sea Surface Salinity Variability in the Equatorial Indo-Pacific Ocean Induced by Madden-Julian Oscillations. J. Geophys. Res., 120, 2233–2258, DOI: 10.1002/2014JC010647.

78. Li, J., W. Lee, **T. Lee**, et al., 2015: The Impacts of Cloud Snow Radiative Effects on Pacific Ocean Surface Heat Fluxes, Surface Wind Stress, and Ocean Temperatures in Coupled GCM Simulations. J. Geophys. Res., 120, 2242–2260, DOI:10.1002/2014JD022538.

77. Yu, J.-Y., H.- Paek, E.S. Saltzman, and **T. Lee**, 2015: The early-1990s change in ENSO-PSA-SAM relationships and its impacts on Southern Hemisphere climate. J. Clim, **28**, 9393–9408. doi: http://dx.doi.org/10.1175/JCLI-D-15-0335.1.

76. Fujii, Y. and co-authors (incl. T. Lee), 2015: Evaluation of the tropical Pacific observing system from the ocean data assimilation perspective. Q. J. Rol. Meteorol. Soc., DOI: 10.1002/qj.2579. Oct. 2015.

75. Capotondi, A. and co-authors (incl. T. Lee), 2015: Understanding ENSO Diversity. Bull. Amer. Meteorol. Soc., 96, 921–938, doi:10.1175/BAMS-D-13-00117.1.

74. Storto, A. and co-authors, 2015 (incl. T. Lee): Steric sea level variability (1993-2010) in an ensemble of ocean reanalyses and objective analyses. Clim. Dyn., DOI 10.1007/s00382-015-2554-9.

73. Toyoda, T. and co-authors, 2015 (incl. T. Lee): Intercomparison and validation of the mixed layer depth fields of global ocean synthesis/reanalyses. Clim. Dyn., DOI:10.1007/s00382-015-2637-7.

72. Balmaseda, M.A. and co-authors (incl. T. Lee), 2015: The ocean reanalysis Intercomparison project (ORA-IP). J. Oper. Oceanogr., 8, 80-97, DOI:10.1080/1755876X.2015.1022329.

71. Toyoda, T. and co-authors (incl. T. Lee), 2015: Interannual-decadal variability of wintertime mixed layer depths in the North Pacific detected by an ensemble of ocean syntheses. Clim. Dyn., DOI:10.1007/s00382-015-2762-3.

70. Palmer, M.D. and co-authors (incl. T. Lee), 2015: Ocean heat content variability and change in an ensemble of ocean reanalyses. Clim. Dyn. DOI:10.1007/s00382-015-2801-0.

69. Valdivieso, M.H. and co-authors (incl. T. Lee), 2015: An assessment of surface heat fluxes from ocean and coupled reanalyses. Clim. Dyn., 49, 983–1008(2017). DOI 10.1007/s00382-015-2843-3. Oct. 2015.

68. Tonani, M. and co-authors, 2015 (incl. T. Lee): Status and future of global and regional ocean prediction systems. J. Oper. Oceanogr., DOI:10.1080/1755876X.2015.1049892.

2014:

*67. Flato, G, J. Marotzke, and B. Abiodun and co-authors (incl T. Lee), 2014: Evaluation of Climate Models, Chpt.9 in "Climate change 2013: the physical science basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change", pp741-866. Cambridge University Press. doi.org/10.1017/CBO9781107415324.02.

66. **Lee, T.**, G. Lagerloef, H.-Y. Kao, M.J. McPhaden, J. Willis, M. Gierach, 2014: The influence of salinity on tropical Atlantic instability waves. J. Geophys. Res., 119, DOI:10.1002/2014JC010100.

65. Zhang, D., M.J. McPhaden, **T. Lee**, 2014: Observed interannual variability of zonal currents in the

equatorial Indian Ocean thermocline and their relation to Indian Ocean Dipole. Geophys. Res. Lett., 41, doi:10.1002/2014GL061449.

64. Han, W., J. Vialard, M. McPhaden, **T. Lee,** Y. Masumoto, M. Feng, and W. de Ruijter, 2014: Indian Ocean decadal variability: a review. Bull. Amer. Meteorol. Soc., 95, 1679-1703. 10.1175/BAMS-D-13-00028.1.

63. Yin, X., J. Boutin, G. Reverdin, **T. Lee**, S. Arnualt, and N. Martin, 2014: SMOS sea surface salinity signals of tropical instability waves. J. Geophys. Res., 119, 7811–7826, DOI: 10.1002/2014JC009960.

62. Guan, B, D. Waliser, **T. Lee**, and D. Halkides, 2014: Influence of the Madden-Julian Oscillation on the Indian Ocean cross-equatorial heat transport. Geophys. Res. Lett., DOI: 10.1002/2014GL061789.

61. Landerer, F.W, P.J. Gleckler, **T. Lee**, 2014: Evaluation of dynamic sea surface height in CMIP3 and CMIP5 models against satellite observations. Clim. Dyn., DOI 10.1007/s00382-013-1939-x.

60. Tang, W., S. H. Yueh, A. G. Fore, A. Hayashi, **T. Lee**, and G. Lagerloef, 2014: Uncertainty of Aquarius sea surface salinity retrieved under rainy conditions and its implication on the water cycle study, J. Geophys. Res. Oceans,119, 4821–4839, doi:10.1002/2014JC009834.

59. Sprintall, J., A. Gordon, A. Koch-Larrouy, **T. Lee**, J. Potemra, K. Pujiana, and S. Wijffels, 2014: The central Role of the Indonesian Seas and throughflow in the coupled ocean-climate system. Nature Geosci., doi:10.1038/ngeo2188.

58. Reul, N., B. Chapron, **T. Lee**, C. Donlon, J. Boutin, G. Alory, 2014: Sea surface salinity structure of the meandering Gulf Stream revealed by SMOS sensor. Geophys. Res. Lett., DOI: 10.1002/2014GL059215.

57. Guan, B, **T. Lee**, D. Waliser, and D. Halkides, 2014: Aquarius Surface Salinity and the Madden-Julian Oscillation: the Role of Salinity in Surface Layer Density and Potential Energy. Geophys. Res. Lett., 41, doi:10.1002/2014GL059704.

56. Li, J.-L. F., W.-L. Lee, D.E. Waliser, J.D. Needlin, J.P. Statchnik, and **T. Lee**, 2014: Cloud-Precipitation-Radiation-Dynamics Interaction in Global Climate Models: A Snow and Radiation Interaction Sensitivity Experiment. J. Geophys. Res. – Atmos., 119, DOI: 10.1002/2013JD021038.

55. Zou, Y., J.-Y. Yu, **T. Lee**, M.-M. Lu, and S.T. Kim, 2014: CMIP5 Model Simulations of the Changing Impacts of El Niño on US Winter Temperature. J. Geophys. Res., 119, DOI: 10.1002/2013JD021064.

54. Liu, W.T., X. Xie, **T. Lee**, 2014: Solar warming of the south-central Pacific Ocean during the 2009-10 El Niño. Int. J. Remote Sensing. DOI: 10.1080/01431161.2014.926426.

2013:

53. **Lee, T.,** D.E. Waliser, J.-L. Li, F.W. Landerer, and M.M. Gierach, 2013: Evaluation of CMIP3 and CMIP5 wind stress climatology using satellite measurements and atmospheric reanalysis products. *J. Clim*., 26, 5810-5826, doi:10.1175/JCLI-D-12-00591.1.

52. Gierach, M.M., J. Vazquez, **T. Lee**, and V. Tsontos, 2013: Aquarius and SMOS detect effects of an extreme Mississippi River flooding event in the Gulf of Mexico. Geophys. Res. Lett., 40, doi:10.1002/grl.50995.

51. Gierach, M.M., Messie, **T. Lee**, K.B. Karnauskas, and M.H. Radenac, 2013: Biophysical responses near equatorial islands in the western Pacific Ocean during El Nino/La Nina transitions. Gepphys. Res. Lett., 40, doi:10.1002/2013GL057828.

*50. Schiller, A.**, T. Lee**, and S. Masuda, 2013: Methods and applications of ocean state estimation and data assimilation in climate research. Chapter 22 in "Ocean Circulation and Climate – A 21st century perspective", International Geophysics Series, Vol.103, 868pp. Edited by G. Sielder, J. Church, S. Griffes, J. Gould, and J. Church. Academic Press, Elsevier. ISBN: 978-0-12-391851-2.

2012:

49. Maneesha, K., V.S.N. Murty, M. Ravichandran, **T. Lee**, W. Yu, and M. McPhaden, 2012: Upper ocean variability in the Bay of Bengal during the tropical cyclones Nargis and Laila. Prog. Oceanogr., 106, 49-61.

48. Yu, J.-Y., Y. Zou, S.-T. Kim, and **T. Lee**, 2012: The changing impact of El Nino on US winter temperatures. *Geophys. Res. Letts.*, 39, L15702, doi:10.1029/2012GL052483.

47. **Lee, T.**, G. Lagerloef, M.M. Gierach, H.-Y. Kao, SS. Yueh, and K. Dohan, 2012: Aquarius reveals salinity structure of tropical instability waves. *Geophys. Res. Lett.*, 39, L12610, doi:10.1029/2012GL052232

46. Gierach, M.M., **T. Lee**, DD. Turk, M. McPhadden, 2012: Biological response to the 1997-98 and 2009-10 El Nino events in the equatorial Pacific Ocean. *Geophy. Res. Lett*., 39, L10602, doi:10.1029/2012GL051103.

2011:

45. Halkides, D.J., L. E. Lucas, D. E. Waliser, **T. Lee**, and R. Murtugudde, 2011: Mechanisms controlling mixed layer temperature variability in the eastern tropical Pacific on the intraseasonal timescale. *Geophys. Res. Lett.*, 38, L17602, doi:10.1029/2011GL048545.

44. McPhaden, M., **T. Lee**, and D. McClurg, 2011: El Niño and its Relationship to Changing Background Conditions in the Tropical Pacific. *Geophys. Res. Lett*., 38, L15709, doi:10.1029/2011GL048275.

43. Halkides, D., and **T Lee**, 2011: Mechanisms controlling seasonal mixed layer temperature and salinity in the southwestern tropical Indian Ocean. *Dyn. Ocean. Atmos*., 51, 77-93, DOI:10.1016/j.dynatmoce.2011.03.002.

42. Halkides, D., **T. Lee**, and S. Kida, 2011: Mechanisms controlling seasonal mixed layer temperature and salinity of the Indonesian Seas. *Ocean Dyn.,* vol.6, issue 4, 481, DOI 10.1007/s10236-010-0374-3.

41. Boening, C., **T. Lee,** and V. Zlotnicki, 2011: A record-high ocean bottom pressure in the South Pacific observed by GRACE. *Geophys. Res. Lett*., 38, L04602, doi:10.1029/2010GL046013.

40. Yu, J.-Y., H.-Y. Kao, **T. Lee**, and S.T. Kim, 2011: Subsurface Ocean Temperature Indices for Central-Pacific and Eastern-Pacific Types of El Niño and La Niña Events. *Theoretical And Applied Clim.*, vol. 103, issues 3-4, 337-344. DOI 10.1007/s00704-010-0307-6.

39. Mehta, V.M., G. Meehl, L. Goddard, J., Knight, A. Kumar, M. Latif, T., **Lee T**, A. Rosati, D., Stammer, 2011: Decadal climate predictability and prediction: where are we? Bull Am Meteorol Soc 92:637–640. https://doi.org/10.1175/2010BAMS3025.1.

2010:

38. **Lee, T.**, B. Qiu, S. Hakkinen, K. Kelly, B. Qiu, H. Bonekamp, and E. Lindstrom, 2010: Satellite observations of ocean circulation changes associated with climate variability. *TOS, Oceanography*. Vol.23, No.4, 70-81.

37. **Lee, T.**, W. Hobbs, and J. Willis, et al., 2010: Record warming in the South Pacific and western Antarctica associated with the strong central-Pacific El Niño in 2009-10. *Geophys. Res. Lett.*, 37, L19704, doi:10.1029/2010GL044865.

36. **Lee, T.,** and M. McPhaden, 2010: Increasing intensity of El Nino in the central-equatorial Pacific. *Geophys. Res. Lett.*, L14603, doi:10.1029/2010GL044007.

35. **Lee, T.**, T. Awaji, M. Balmaseda, et al. 2010: Consistency and fidelity of Indonesian-throughflow total volume transport estimated by 14 ocean data assimilation products. Dyn. Atmos. Oceans. doi:10.1016/j.dynatmoce.2009.12.004.

34. Volkov, D., L.-L Fu, and **T. Lee**, 2010: Mechanisms of the meridional heat transport in the Southern Ocean. *Ocean Dyn***.**, 60, 791-801, DOI: 10.1007/s10236-010-0288-0.

33. Feng, M., M.J. McPhaden, and **T. Lee**, 2010: Decadal variability of the Pacific subtropical cells and their influence on the southeast Indian Ocean. *Geophys. Res. Lett.*, L09606. DOI: 10.1029/2010GL042796.

32. Yu, J.-Y., H.-Y. Kao, and **T. Lee**, 2010: Subtropics-Related Interannual Sea Surface Temperature Variability in the Central Equatorial Pacific. *J. Clim.*, 23, 2869-2884.

*31. You, J. and co-authors (incl. T. Lee), 2010: Indonesian Throughflow: PACific Source Water INvestigation (PACSWIN): An international ocean climate program, “Climate Alert: Climate Change Monitoring and Strategy", chapt.8, 238-298, Sydney Univ. Press., ISBN: 9781920899417.

Prior to 2010:

30. **Lee, T.**, T. Awaji, M.A. Balmaseda, E. Greiner, and D. Stammer. 2009. Ocean state estimation for climate research. *Oceanography* 22(3):160–167, http://dx.doi.org/10.5670/oceanog.2009.74.

29. Halkides, D., and **T. Lee**, 2009: Mechanisms controlling seasonal-to-interannual mixed-layer temperature variability in the southeastern tropical Indian Ocean. *J. Geophys. Res.*, 114, C02012, doi:10.1029/2008JC004949.

28. McPhaden, M.J., G.R. Foltz, and **T. Lee**, et al., 2009: Ocean-atmosphere interaction during Cyclone Nargis. *Eos Trans*. American Geophys. Union, vol. 90, No. 7, 17 February 2009.

27. Dombrowsky E., et al., 2009: GODAE Systems in operation, Oceanography, Volume 22-3: 80-95. http://dx.doi.org/10.5670/oceanog.2009.68.

26. **Lee, T.**, and M. J. McPhaden, 2008: Decadal phase change in large-scale sea level and winds in the Indo-Pacific region at the end of the 20th century. *Geophys. Res. Lett.*, 35, L01605, doi:10.1029/2007GL032419.

25. **Lee, T.**, O. Wang, W.-Q. Tang, and W.T. Liu, 2008: Wind stress measurements from the QuikSCAT-SeaWinds scatterometer tandem mission and the impact on an ocean model. *J. Geophys. Res.*, 113, C12019, doi:10.1029/2008JC004855.

24. Volkov, D. L., **T. Lee**, and L.-L. Fu, 2008: Eddy-induced meridional heat transport in the ocean, Geophys. Res. Lett., doi:10.1029/2008GL035490.

23. Cabanes, C., **T. Lee**, and L.-L. Fu, 2008: Mechanisms of interannual variations of the meridional overturning circulation of the North Atlantic Ocean. *J. Phy. Oceanogr.*, 38, 467-480.

22. Kim, S.-B., **T. Lee**, I. Fukumori, 2007: Mechanisms controlling the interannual variation of mixed layer temperature averaged over the NINO3 region. *J. Clim.*, 20, 3822-3843.

21. Halkides, D. J., W. Han, **T. Lee**, and Y. Masumoto, 2007: Effects of sub-seasonal variability on seasonal-to-interannual Indian Ocean meridional heat transport, *Geophys. Res. Lett.*, 34, L12605, doi:10.1029/2007GL030150.

20. Fukumori, I., D. Menemenlis, **T. Lee**, 2007: A near-uniform basin-wide sea level fluctuation of the Mediterranean Sea. *J. Phys. Oceanogr.*, 37, 338-358.

19. Kim, S.-B., I. Fukumori, **T. Lee,** 2006: The closure of the ocean mixed layer temperature budget using level-coordinate model fields. *J. Ocean. Atmos. Tech.*, 23, 840-853.

18. **Lee, T.**, and W. T. Liu, 2005: Effects of high-frequency wind sampling on simulated mixed-layer depth and upper-ocean temperature. *J. Geophys. Res.*, 110, C05002, doi: 10.1029/2004JC002746.

17. Menemenlis, D., I. Fukumori, and **T. Lee**, 2005: Using Green's functions to calibrate an ocean general circulation model. *Mon. Weather. Rev.*, 133, 1224-1240.

16. Kim, S.-B., **T. Lee**, and I. Fukumori, 2004: The 1997-99 abrupt change of the upper ocean temperature in the northcentral Pacific. *Geophys. Res. Lett.*, 31, L22304, doi:10.1029/2004GL021142.

15. **Lee, T.**, 2004: Decadal weakening of the shallow overturning circulation in the South Indian Ocean. *Geophys. Res. Lett.*, 31, L18305, doi:10.1029/2004GL020884.

14. **Lee, T.**, I. Fukumori, and B. Tang, 2004: Temperature advection: internal versus external processes. *J. Phys. Oceanogr.,* 34, 1936-1944.

13. Wang, O., I. Fukumori, **T. Lee**, and B. Cheng, 2004: On the cause of eastern equatorial Pacific Ocean T-S variations associated with El Nino. . *Geophys. Res. Lett.*, 31, L15310, doi:10.1029/2004GL02472.

12. Fukumori, I., **T. Lee**, B. Cheng, and D. Menemenlis, 2004: The origin, pathway, and destination of NINO3 water estimated by a simulated passive tracer and its adjoint. *J. Phys. Oceanogr.*, 34, 582-604.

11. Wang, O., I. Fukumori, **T. Lee**, and G. Johnson, 2004: Eastern equatorial Pacific Ocean T-S variations with El Nino. *Geophys. Res. Lett.*. 31, L04305. doi:10.1029/2003GL019087.

10. **Lee, T.**, and I. Fukumori, 2003: Interannual to decadal variation of tropical-subtropical exchange in the Pacific Ocean: boundary versus interior pycnocline transports. *J. Climate*. 16, 4022-4042.

9. **Lee, T.**, I. Fukumori, D. Menemenlis, Z. Xing, and L.-L. Fu, 2002: Effects of the Indonesian Throughflow on the Pacific and Indian Ocean. *J. Phys. Oceanogr.,* 32, 1404-1429.

8. **Lee, T.**, J.-P. Boulanger, A. Foo, L.-L. Fu, and R. Giering, 2000: Data assimilation by an intermediate coupled ocean-atmosphere model: application to the 1997-1998 El Nino. *J. Geophys. Res.*, 105, 26063-26087.

7. Marotzke, J., R. Giering, K. Zhang, D. Stammer, C. Hill, and **T. Lee**, 1999: Construction of the adjoint MIT ocean general circulation model and application to Atlantic heat transport sensitivity. *J. Geophys. Res.*, 104, 29529-547.

6. **Lee, T.** and J. Marotzke, 1998: Seasonal cycle of meridional overturning and heat transport of the Indian Ocean. *J. Phys. Oceanogr.*, vol. 28, 923-943.

5. **Lee, T.** and J. Marotzke, 1997: Inferring meridional mass and heat transports of the Indian Ocean by fitting a GCM to climatological data. *J. Geophys. Res.*, vol. 102, 10585-10602.

4. **Lee, T.** and P. Cornillon, 1996: Propagation of Gulf Stream meanders between 74 and 70W. *J. Phys. Oceanogr.*, vol. 26, 205-224.

3. **Lee, T.** and P. Cornillon, 1996: Propagation and growth of Gulf Stream meanders between 75 and 45W. *J. Phys. Oceanogr.*, vol. 26, 225-241.

2. **Lee, T.** and P. Cornillon, 1995: Temporal variation of meandering intensity and domain-wide lateral oscillations of the Gulf Stream. *J. Geophys. Res.*, vol. 100, 13603-13613.

1. Cornillon, P., **T. Lee**, and G. Fall, 1994: On the probability that a Gulf Stream meander crest detaches to form a warm core ring. *J. Phys. Oceanogr.*, vol. 96, 132-155.

SELECTED AWARDS

- 2020 NASA Exceptional Scientific Achievement Medal
- 2020 JPL Ed Stone Award for Outstanding Research Publication
- 2015 JPL People Leadership Award
- 2012 NASA Exceptional Scientific Achievement Medal
- 2012 JPL Team Achievement Award for contribution to IPCC Fifth Assessment Report
- 2011 JPL Mariner Award for extraordinary scientific productivity
- 2010 NASA Exceptional Achievement Medal
- 2009 NASA Group Achievement Award: PO.DAAC Team
- 2003 and 2008 JPL Team Achievement Award: ECCO Ocean Data Assimilation Team

CONTRIBUTIONS TO NASA/JPL MISSION EFFORTS

- Project Scientist of NASA Aquarius satellite mission (2013-2017) and the principal architect and writer for the Science Section of the 2015 NASA Senior Review Proposal for Aquarius Extended Mission, leading to a selection for the extended mission.
- Project Lead of the NASA Salinity Continuity Project (since 2017) beyond Aquarius Phase-F to extend NASA salinity record using measurements from NASA's SMAP satellite.
- Team Lead for NASA Ocean Salinity Science Team (2019-present).
- NASA Lead for a joint NASA-ESA effort to develop a multi-mission satellite salinity validation and exploitation platform endorsed by the NASA-ESA Joint Program Planning Group (2019-present).

- Ocean Lead for NASA-ESA collaboration on the Copernicus Imaging Microwave Radiometer (CIMR), a Copernicus High Priority Candidates mission.
- Leads for community white papers in response to NRC Decadal Survey in Earth Science and Applications from Space 2017-2027 RFI#1 (2015) and RFI#2 (2016).
- Project Scientist of NASA Earth Venture Mission-3 mission concept "Butterfly" for air-sea heat and moisture flux measurements (since 2019).
- Co-lead of NASA Science Working Group for the DoD-sponsored STP-H8 satellite mission for wind and precipitation measurements (since 2020).
- Project Lead for in-situ field tests of broad-band low-frequency radiometer to advance next-gen satellite sensors for polar ocean/ice measurements (since 2018).
- Project Lead for development of a miniaturized upward-looking remote-sensing instrument (microwave sounder) to profile atmospheric boundary layer from ocean-surface autonomous platforms for satellite cal/val (since 2020).

AFFILIATION WITH PROFESSIONAL SOCIETIES

- Member of American Geophysical Union since 1998
- Member of American Meteorology Society since 2006
- The Oceanography Society since 2018

COMMUNITY LEADERSHIP & SERVICES

- Lead guest editor for Frontiers in Marine Science OceanObs'19 Collection of 150 peer-reviewed community perspective papers that chart the course for the next decade of ocean observing (2018-2020)
- Chair of US Climate Variability and Predictability (CLIVAR) Program Scientific Steering Committee (2019) and Executive Committee Member (2017-2019)
- Co-chair of OceanObs'19 Program Committee (2017-2020)
- Chair of the Committee on Space Research (COSPAR) Sub-commission A2 "Ocean Dynamics, Productivity, and Cryosphere" (2016-2021)
- Co-chair of International Climate Variability and Predictability (CLIVAR) Program's Global Synthesis and Observations Panel (2012-2016) and member (2010-2016)
- Co-chair of US CLIVAR Phenomena, Observations, and Synthesis Panel (2010-2011) and member (2007-2009)
- Executive Committee and task team leader for US Atlantic Meridional Overturning Circulation (AMOC) Program (2007-2010)
- Steering Team member of Global Ocean Data Assimilation Experiment (GODAE) (2003-2008)
- Global Climate Observing System (GCOS) Ocean Observation Panel for Climate (OOPC) and Global Ocean Observing System (GOOS) Panel for Physics and Climate member (2017-present)
- Tropical Pacific Observing System (TPOS) 2020 Backbone System Task Team member (2015-present).
- International CLIVAR Indonesian Throughflow Task Force member (2011-2014)
- International CLIVAR ENSO in a Changing Climate Task Team member (2013-2019)
- US CLIVAR ENSO Diversity Working Group member (2012-2015)
- International CLIVAR and IOC/GOOS Indian Ocean Panel member (2006-2013)
- US Argo Program panel member (2004-2009)
- Mentor and NASA host for the "Mentoring Physical Oceanography Women for Increasing Retention" (MPOWIR, https://mpowir.org) Program (since 2010)

OTHER COMMUNITY LEADERSHIP EFFORTS AND PROFESSIONAL SERVICES

Leadership of Community whitepapers

- Lead-authored an International CLIVAR whitepaper on a framework for the evaluation and Intercomparison of global ocean synthesis products (2006).
- Lead-authored a US CLIVAR whitepaper on the strategy for a US Integrated Earth System Analysis (2007).
- Lead-authored an OceanObs'99 community whitepaper on ocean state estimation for climate research (2009).
- Lead-authored a review article in Oceanography Magazine article on ocean state estimation for climate research (2009).
- Lead-authored a review article in Oceanography Magazine on applications of satellite observations for ocean and climate research (2010).
- Co-led two community whitepapers for Tropical Observing System (TPOS) 2020 on ENSO and on satellite observing systems (2014).
- Lead-authored community whitepaper on ocean salinity and water cycle research priorities in response to US National Academy of Sciences 2017-2027 Decadal Survey in Earth Science and Technology from Space RFI#1 (2015).
- Lead-authored community whitepaper on a space-based measurement concept for ocean salinity and sea ice in response to US National Academy of Sciences 2017-2027 Decadal Survey in Earth Science and Technology from Space RFI#2 (2016).
- IPCC Assessment Report 5, Chapter 9 contributing author (2013).

Initiatives

- Leadership role for a US CLIVAR initiative on Integrated Earth System Analysis (IESA); represented ocean assimilation/synthesis community in National Research Council Climate Research Committee meeting in 2006 on IESA.
- Leadership role under International CLIVAR and GODAE to develop a framework and lead an internationally coordinated effort on the evaluation and intercomparison of global ocean synthesis products during 2006-2010 and with a renewed effort from 2013 onward.
- Served as US AMOC Program Executive Committee member to help develop the US AMOC Program Implementation Plan (2007).
- Initiated the US CLIVAR ENSO Diversity Working Group (2012).
- Helped establish "ENSO in a Changing Climate" Research Focus under International CLIVAR and form an international task team for this Research Focus (2013).

Organizations of professional workshops and conference special sessions:

- Co-convened Ocean Sciences Meeting special session on high-wavenumber and high-frequency wind forcing of the ocean (2004).
- Key organizer of Global Ocean Data Assimilation Experiment (GODAE) Symposium, Beijing, China (2006).
- Co-convened Fall AGU Meeting special session on earth system data assimilation (2006).
- Co-convened Ocean Sciences Meeting special session on global and regional ocean synthesis (2008).
- Key organizer for US CLIVAR Integrated Earth System Analysis workshop (2008).
- Co-organized a decadal variability workshop (2009).
- Organized and chaired a joint US-Europe AMOC Science Team meeting (2010).
- Co-organized a US CLIVAR ENSO Diversity workshop (2013).
- Co-convened International CLIVAR workshop on surface fluxes and ocean synthesis (2013).
- Served as a key organizer of the COSPAR/WCRP/ESA/IOC sponsored capacity-building workshop for the Indonesian throughflow (2014).
- Served as member of scientific organizing committee for Tropical Pacific Observing System (TPOS) 2020 International workshop (2014).

- Co-convened Ocean Sciences Meeting special session on ocean salinity and water cycle (2014).
- Co-convened two special sessions in 2014 Fall AGU meeting ("Maritime Continent" and "From QuikSCAT to RapidSCAT").
- Co-organized "Ocean Salinity Science & Salinity Remote Sensing" workshop in UK Met Office, 2014.
- Co-organized International "Global Heat Balance and Ocean Heat Content" workshop in UK Met Office, 2015.
- Co-organized International Conference on "Ocean Salinity and Freshwater Changes" in Hamburg, Germany, 2015.
- Main organizer of Aquarius/SAC-D Science Team Meeting, Buenos Aires, Argentina, Nov. 2015.
- Co-convener of EGU "Ocean Remote Sensing" Session for 2014-2020.
- Co-convener of EGU "Ocean Salinity and Marine Hydrological Cycle". 2016-2018.
- Scientific Organizing Committee member, European Space Agency Living Planet Symposium 2016.
- Co-convener of 2016 Fall AGU "Ocean salinity and water cycle" session. 2016.
- Co-convener of 2017 Fall AGU "Ocean salinity and its role in ocean dynamics and the water cycle" session. 2017.
- Lead organizer of COSPAR 2018 session "Scientific Exploitation of Oceanographic Measurements From New Missions and Heritage Data Sets".
- Scientific Committee member of Liege Colloquium on Ocean Dynamics, Liege, Belgium, May 2018.
- Organizer of 2018 NASA Ocean Salinity Science Team and Salinity Continuity Processing meeting, Santa Rosa, CA, Aug. 2018.
- Scientific Committee member for Ocean Salinity Science Conference, Paris, France, November 2018.
- Scientific Organizing Committee member, European Space Agency Living Planet Symposium 2019.
- Co-Chair and key organizer of decadal ocean observing community conference OceanObs'19.
- Lead organizer of COSPAR 2021 Event "Scientific Exploitation of Oceanographic Measurements From New Missions and Heritage Data Sets".
- Lead organizer of the International Ocean Salinity Conference, postponed to November 2021.

SELECTED INVITED PRESENTATIONS IN INTERNATIONAL CONFERENCES/WORKSHOPS

- International Union of Geodesy and Geophysics (IUGG) Conference, Cairns, Australia, 2005 (two invited presentations).
- Ocean Surface Topography Science Team Meeting, Hobart, Australia, 2007.
- Pan Ocean Remote Sensing Conference, Guangzhou, China, 2008.
- Global Ocean Data Assimilation Experiment (GODAE) Final Symposium, Nice, France, 2008.
- International Workshop on Decadal Variability and Predictability, St. Michaels, MD, 2009.
- 10th International Conference on Southern-hemisphere Meteorology and Oceanography, Noumea, New Caledonia, 2013.
- International Union of Geodesy and Geophysics (IUGG) Conference, Gothenburg, Sweden, 2014.
- Ocean Salinity Science & Salinity Remote Sensing Workshop in UK Met Office, 2014.
- International Global Navigation Satellite System (GNSS) Reflection Conference in Potsdam, Germany, 2015.
- IEEE International Geoscience and Remote Sensing Society (IGARSS) conference, Milan, Italy, 2015.
- International Conference on Ocean Salinity and Freshwater Changes, Hamburg, Germany, 2015.
- European Union Cooperation in Science and Technology (COST) Action Evaluation of Ocean Synthesis Consortium workshop, Porto, Portugal, March 2016.
- EUMETSAT Satellite Meteorology Conference, Darmstadt, Germany, September 2016.
- Global Ocean Salinity and the Water Cycle Workshop, Woods Hole, MA. May 2017.
- ESA/ECMWF Workshop on Using Low Frequency Passive Microwave Measurements in Research and Operational Applications. Reading, UK. December, 2017.

- Global Ocean Data Assimilation Experiment (GODAE) OceanView International School, September 2017, Mallorca, Spain.
- Joint American Meteorology Society & Australian Meteorological and Oceanographic Society's International Conference on Southern Hemisphere Meteorology and Oceanography, Sydney, Australia, January 2018.
- ESA Salinity Science and Climate Change Initiative workshop, Hamburg, Germany, September 2019.
- "Earth Explorers for Climate - The contribution from SMOS" Symposium, Cornwall, UK, March 2020 (cancelled).
- WCRP and CLIVAR workshop on Ocean Heat and Freshwater Storage and Transports in Observations and Climate Models. Exeter, UK, Oct., 2020 (cancelled).

REVIEW PANELS:

- Review panel members in various NASA and NOAA review panels and as mail reviewers for NASA, NOAA, NSF (since 1998).
- COSPAR review panel for COSPAR fellowships (2014-2017).
- International Advisory Board member for EU EuroSea Consortium (https://eurosea.eu/) (since 2019).

POSTDOCS ADVISED/MENTORED:

Seungbum Kim, Cecile Cabanes, Denis Volkov, Daria Halkides, William Llovel, Carmen Boening, Audrey Hasson, Severine Fournier, Andrew Delman, Hrishikesh Chandanpurkar.

PH.D THESIS COMMITTEES:

- University of California Irvine, 2005-2009 (student advised: Hsun-Ying Kao), 2012-2015 (student advised: Yuhao Zhou).
- University of Delaware, 2012-2016 (student advised: Autumn Kidwell).