VICTOR ZLOTNICKI

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RESPONSIBILITIES:

2014-now **Assistant Section Manager**, Earth Science Section, JPL

2010-2014 **Deputy Section Manager**, then **Acting Section Manager**, Climate, Oceans and Solid Earth Science section, JPL.
Coordinate, guide, evaluate the work of about 70 employees and 15 postdocs.

2007-2010 **Group Supervisor**, Oceans and Ice Group, JPL
Coordinate, guide, evaluate the work of about 10 employees and postdcs.

2004-now **Principal Research Scientist**, Oceanography, JPL.
Publish original research in the general area of ocean circulation as viewed by satellite observations.

2002-now **Discipline Program Manager, Climate Variability Pgm**, JPL.
Coordinate and enhance JPL's oceans and cryospheric work. Nurture new research areas. Represent the work of many JPL researchers to senior NASA management, and the direction of NASA to JPL researchers. Advise senior JPL management and the Chief Scientist of the Earth Science and Technology Directorate on research directions.

1995-2002 **Project Scientist, EOSDIS-PO.DAAC** (Physical Oceanography Distributed Archive) .
Keep the JPL Task, NASA and GSFC focused on user needs. Maintain the scientific integrity of Project work. Represent PO-DAAC to NASA and the ocean science community.

1988-now **Task Manager, Oceans Group Computing** task, JPL.
Set the standards to maintain a reliable and constantly evolving computing environment for members of the JPL Oceans groups.

1988-2004 **Research Scientist**, Oceanography, JPL.
Publish original research in the general area of ocean circulation as viewed by satellite observations.

1992 **Invited Lecturer**, International Summer School on Satellite Altimetry in Geodesy and Oceanog., Trieste, Italy.

1985-88 **Project Scientist**, NASA Ocean Data System, JPL.
Same responsibilities as Project Scientist, EOSDIS-PO.DAAC.

1984-85 **Resident Research Associate**, National Research Council, at NASA's Goddard Space Flight Center.

1984 **Visiting Scientist**, Institut de Physique du Globe de Paris University of Paris VI, France.

1983-84 **Postdoctoral Associate**, Massachusetts Inst. of Technology.

EDUCATION:

1983 Ph.D. in Oceanography, Massachusetts Institute of Technology and Woods Hole Oceanographic Institution

1976 Geophysical Eng. coursework completed, Univ. Buenos Aires, Argentina

1974 Land Surveyor (approx. Bachelor's degree) Univ. Buenos Aires, Argentina

AWARDS:

2019 JPL People Leadership award.
1999 NASA Exceptional Service Medal
1998 JPL Award of Excellence

SOCIETIES:

AGU, IEEE.

MISSION SCIENCE TEAMS:

Ocean Surface Topography Science Team (Principal Investigator, 2008-2011; co-investigator 2004-2007; co-investigator 2013-)

Gravity Recovery and Climate Experiment (Principal Investigator, 2002-2009; co-I 2010-date)

Principal Investigator in various NASA announcements (MEASURES, Accelerating Operating Use of NASA Data, etc).

POSTDOCTORAL ADVISOR:

- David Garcia-Garcia (now Assistant Professor of Applied Math., Univ of Alicante, Spain)
- Antonio Fernando Härter Fetter Filho (now Adjunct Professor, Universidade Federal de Santa Catarina, Brazil)
- Carmen Boening (now research scientist and Deputy Section Manager at Jet Propulsion Laboratory).

SERVICE:

2014-15 GRACE-FO Science Data System Review Board (PDR, CDR), Chair
2011-15 Jason-3 Standing Review Board.
2005-7 OSTM Standing Review Board (composed of representatives of NOAA, NASA, CNES and Eumetsat).
2006 JPL/OSTM/AMR Cal-Val Peer Review Board, chair.
2005 NASA Earth Science and Applications from Space Strategic Roadmap Committee (FACA), member
NASA/NOAA/CNES/EUMETSAT OSTM mission standing review board
NASA EOSDIS Evolution Technical Panel consultant
2003: JPL/OSTM/AMR Error Budget Peer Review, panel chair.
JPL/OSTM (Ocean Surface Topography Mission)/WSOA System Engineering PDR, panel member.
JPL/Stone Award Committee, member.
JPL/GRACE Post-launch Assessment Review (PLAR II)
2002: U. Colorado/National Snow and Ice Data Center External Review, panel member.
JPL/Seawinds Mission Readiness Review, comm. member.
1994: NOAA/National Ocean Service Review, panel member.
1993: NOAA/National Ocean Data Center Review, panel chair.
1992-93:: National Research Council, Committee on Geophysical Data, member.

1992-2001: World Ocean Circulation Experiment, Data Committee, member/chair.
1991-1992: ICSU/SCOR Working Group 94 Chair (Scientific Committee on Oceanic Research, International Council of Scientific Unions, Working Group on Surface Ocean Currents from Altimetry and traditional methods)
1985-now:: Manuscript reviewer: JGR, JTech, IEEE-TGRS, GRL, Mar. Geodesy, J. Geodesy. J. Geophys., Ocean Science.
1985-now: Proposal reviewer: NASA, NOAA, NSF.

REFEREED PUBLICATIONS and BOOK CHAPTERS.
(excludes non peer-reviewed, oral and other presentations)

44. 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 Sens. 2020, 12, 1796; doi:10.3390/rs12111796

43. Li, Z., C. Zuffada, S. Lowe, T. Lee and **V. Zlotnicki** (2016): Analysis of GNSS-R Altimetry for Mapping Ocean Mesoscale Sea Surface Heights Using High Resolution Model Simulations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol PP, issue 99, pp 1-12. **DOI:** 10.1109/JSTARS.2016.2581699

42. **Zlotnicki V**., S. Bettadpur, F. Landerer and M. Watkins (2013): Remote Sensing of Earth's Gravity Field (GRACE). In: Robert A. Meyers (Ed), Encyclopedia of Sustainability, pp 4563-4584, doi: 10.1007/978-1-4419-0851-3, Springer

41. Volkov D. and **V. Zlotnicki** (2012): Performance of GOCE and GRACE-derived mean dynamic topographies in resolving Antarctic Circumpolar Current fronts. Ocean Dynamics, doi:10.1007/s10236-012-0541-9.

40. Garcia-Garcia D., C. Ummenhoffer and **V. Zlotnicki** (2011): Australian water mass variations from GRACE data linked to Indo-Pacific climate variability. Remote Sensing of Environment (2011), 115, pp2175–2183, doi:10.1016/j.rse.2011.04.007

39. **Zlotnicki V.** and D. Stammer (2011): Meeting Report: Gravity from Space, applications to ocean circulation, sea level rise and cryospheric science studies. Eos, Vol. 90, No. 17, 26 , p145. April 2011

38. 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.

37. Freeman A., **V. Zlotnicki** , T. Liu, B. Holt, R. Kwok , S. Yueh, J. Vazquez, D. Siegel , and G. Lagerloef (2010) Ocean Measurements from Space in 2025. Oceanography, v23 (4), pp 144-161

36. Song, Y.T., R. Gross, X. Wang, and **V. Zlotnicki**, 2010: A non-Boussinesq terrain-following OGCM for oceanographic and geodetic applications, Advances in Geosciences, 18 (Ocean Science, Eds. Gan et al.), 63-86.

35. Hausman J. and **V. Zlotnicki** (2010): Sea State Bias in Radar Altimetry Revisited. Marine Geodesy, 33(S1):336–347, 2010, DOI: 10.1080/01490419.2010.487804

34. Maximenko N., P. Niiler, M-H Rio, O. Melnichenko, L. Centurioni, D. Chambers, V. **Zlotnicki** V., B. Galperin (2009): Mean dynamic topography of the ocean derived from satellite and drifting buoy data using three different techniques. J. Atmosph. Oceanic Technol., DOI: 10.1175/2009JTECHO672.1

33. Song Y.T. and **V. Zlotnicki** (2008): The subpolar ocean-bottom-pressure oscillation and its links to ENSO, Int. J. Remote Sensing, Vol. 29 (21), 6091-6107

32. Song Y. Tony, L.-L. Fu**, V. Zlotnicki**, Chen Ji, Vala Hjorleifsdottir, C. K., Shum, and Yuchan Yi, 2008. The role of horizontal impulses of the faulting continental slope in generating the December 2004 tsunami. Ocean Modelling, 20, 362-379.

31. Syed, T. H., J. S. Famiglietti**, V. Zlotnicki**, and M. Rodell, 2007. Contemporary estimates of Pan-Arctic freshwater discharge from GRACE and reanalysis, Geophys. Res. Lett., 34, L19404, doi:10.1029/2007GL031254.

30. **Zlotnicki V**., J. Wahr, I. Fukumori and Y.-T. Song , 2007: Antarctic Circumpolar Current transport variability during 2003-2005 from GRACE. J. Physical Oceanog., Vol. 37, No. 2, pp 230–244.

29. Liu W. T., X. Xie, W. Tang, and **V. Zlotnicki**, 2006: Spacebased observations of oceanic influence on the annual variation of South American water balance, Geophys. Res. Lett., 33, L08710, doi:10.1029/2006GL025683.

28. Song Y.-T., C. Ji, L.-L. Fu**, V. Zlotnicki**, C. K. Shum, Y. Yi, V. Hjorleifsdottir, 2005: The 26 December 2004 tsunami source estimated from satellite radar altimetry and seismic waves, Geophys. Res. Letters, vol. 32, L20601, doi:10.1029/2005GL023683

27. Tralli D.M., R.G. Blom., **V. Zlotnicki**, A. Donnellan and D. L. Evans, 2005: Satellite remote sensing of earthquake, volcano, flood, landslide and coastal inundation hazards, ISPRS Journal of Photogrammetry & Remote Sensing 59 (2005) 185– 198

26. Wahr J., S. Swenson, **V. Zlotnicki** and I. Velicogna, 2004: Time-Variable Gravity from GRACE: First Results. Geophys. Res. Lett., 2004GL019779.

25. **Zlotnicki V**. and S. Desai, 2004: Assessment of the Jason Microwave Radiometer's Measurement of Wet Tropospheric Path Delay using comparisons to SSM/I and TMI. Marine Geodesy 27 (1-2): p241-254

24. Song Y.T. and **V. Zlotnicki**, 2004: Ocean Bottom Pressure Waves Predicted in the Tropical Pacific. Geophys. Res. Lett, 2003GL018980.

23. Ali A. H. and **V. Zlotnicki**, 2003: Quality of wind stress fields measured by the skill of a barotropic ocean model: Importance of stability of the Marine Atmospheric Boundary Layer. Geoph. Res. Lett., vol 30, No. 3, 1129, doi:10.1029/2002GL016058.

22. Hirose N., I. Fukumori, **V. Zlotnicki** and R. Ponte, 2002: High Frequency Barotropic Response to Atmospheric Disturbances: Sensitivity to forcing, topography and friction. J. Geophys. Res. Vol. 106, No.C12 , p.30,987

21. Tierney C., J. Wahr, F. Bryan and **V. Zlotnicki**, 2000. Short-Period oceanic Circulation: implications for satellite altimetry. Geophys. Res. Lett. Vol. 27 , No. 9 , p.1255.

20. Keihm S., **V. Zlotnicki** and C. Ruff, 2000. TOPEX Microwave Radiometer Performance Evaluation, 1992-1998. IEEE Trans. Geosci. Remote Sens., 38, 1379-1386.

19. Cailliau D. and **V. Zlotnicki**, 2000. Precipitation Detection by the TOPEX/Poseidon dual-frequency radar altimeter, TOPEX microwave radiometer, Special Sensor Microwave/Imager and climatological ship reports. IEEE Trans. Geosci. and Remote Sensing, v38(1), p205-213.

18. McClean J.L., A.J. Semtner and **V. Zlotnicki**, 1997. Comparison of Mesoscale Variability in the Semtner-Chervin quarter degree model, the Los Alamos POP Sixth degree model, and TOPEX/Poseidon Data. J. Geophys. Res., 102(c11), 25203-25226.

17. **Zlotnicki V**., 1994. Correlated Environmental Corrections in Topex/Poseidon, with a Note on Ionospheric Accuracy, J. Geophys. Res. 99, 24907-24914

16. Glazman R.E., A. Greysukh and **V. Zlotnicki**, 1994. Evaluating models of sea state bias in satellite altimetry. J.Geophys.Res., 99(c6), 12581-12593.

15. **Zlotnicki V.,** 1994. Geoid Undulations from Satellite Altimetry, in: P.Vanicek and N. Christou (eds.), The Geoid and its Geophysical Interpretation, CRC Press, pp. 95-112.

14. **Zlotnicki V**., 1993. Quantifying Time-Varying Oceanographic Signals with Altimetry, in: F. Sanso and R. Rummel (eds.), Satellite Altimetry in Geodesy and Oceanography, Lecture Notes in Earth Sciences, 50, pp 144-188, Springer-Verlag

13. **Zlotnicki V**., G.Siedler and B.Klein, 1993. Can the weak surface currents of the Cape Verde Frontal zone be measured with altimetry? J. Geophys.Res. 98 (C2), 2485-2493

12. Perigaud C. and **V.Zlotnicki**, 1992: Importance of Geosat Orbit and Tidal errors in the estimation of Large Scale Indian Ocean Variations, Oceanologica Acta,15(5), 491-505

11. Holland W.R., **V.Zlotnicki**, and L.-L. Fu, 1991. Modelled Time Dependent Flow in the Agulhas Retroflection Region as deduced from Altimeter Data Assimilation, S. African J. of Marine Science, 10:407-427.

10. **Zlotnicki V**., 1991. Sea Level Differences across the Gulf Stream and Kuroshio. J. Physical Oceanog., 21(4), 599-609.

9. Vazquez J., **V. Zlotnicki** and L.-L. Fu, 1990. Sea Level Variability in the Gulf Stream between Cape Hatteras and 50ºW - A Geosat Study., J. Geophys. Res., 95, 17957-17964.

8. **Zlotnicki V.**, L.-L. Fu, and W. Patzert, 1989. Seasonal Variability in Global Sea Level observed with Geosat altimetry, J. Geophys. Res.,94 (C12), 17,959-17,970.

7. Fu L. L. and **V. Zlotnicki**, 1989. Observing oceanic mesoscale eddies from Geosat altimetry: preliminary results, Geophys. Res. Lett.16, 457-460.

6. **Zlotnicki V**. and J.G. Marsh, 1989. Altimetry, ship gravimetry and the general circulation of the North Atlantic, Geophys. Res. Lett., 16(9), 1011-1014.

5. Fu L.-L., D. B. Chelton and **V. Zlotnicki**, 1988. Satellite altimetry: observing ocean variability from space, Oceanog. Mag., 1(2), 4-11.

4. Wunsch C. and **V. Zlotnicki**,1984. The Accuracy of Altimetric Surfaces, Geophys. J. R. astron. Soc., 78, 795-808

3. **Zlotnicki V**.,1984. On the Accuracy of Gravimetric Geoids and the Recovery of Oceanographic Signals from Altimetry, Mar. Geod., 8, 129-157

2. **Zlotnicki V**., B. Parsons and C. Wunsch, 1982. The Inverse Problem of Constructing a Gravimetric Geoid. J. Geophys. Res., 87, 1835-1848.

1. **Zlotnicki V**., J.G. Sclater, I.O. Norton and R.P. Von Herzen, 1980. Heat Flow through the floor of the Scotia, far South Atlantic and Weddell Seas, Geophys. Res. Lett., 7 (4), 421-424.

TECHNICAL REPORTS. CONFERENCE PROCEEDINGS. RELEVANT NON-REFEREED PUBS.

Zlotnicki V. and D. Stammer, Applying Spaceborne Gravity Measurements to Ocean Studies. Eos, Vol. 90, No. 17, page 145. 26 April 2011

Hughes, C.W., C. Wunsch and V. Zlotnicki: Satellite Peers through the Oceans from Space, EOS, 2/15/2000, pg. 68

Wunsch, C. and V. Zlotnicki: Measuring Ocean Bottom Pressure Changes from Space: Report of a Meeting. JPL Tech. Report D-19027, 1999.

Halpern, D., V.Zlotnicki, J.Newman, O.Brown, and F. Wentz, An Atlas of Monthly Mean distributions of GEOSAT Sea Surface Height, SSMI Surface Wind Speed, AVHRR/2 Sea Surface Temperature, and ECMWF Surface Wind Components during 1987, JPL Publication 92-3, available from: Jet Propulsion Laboratory, Pasadena, CA 91109, USA., 1992 (also volumes for: 1988, 1994,1995,1996,1997,1998,1999,2000,2001)

Zlotnicki, V.: The mean sea level of the Gulf Stream estimated from satellite altimetric and infrared data. In H. Sünkel and T. Baker (eds.), Sea surface Topography and the Geoid, International Association of Geodesy Symposia (104), 108-115. Springer-Verlag. 1990.

Zlotnicki, V., A. Hayashi, and L.-L. Fu: The JPL-Oceans-8902 version of Geosat Altimetry data. JPL Tech. Report D-6939, 1990.

Zlotnicki V, I.O. Norton, J.G. Sclater, R.P. von Herzen, 1978. Heat-Flow In The Weddell Sea, Antarct J US 13 (4): 120-121.