

Shimon Wdowinski, Ph.D.

CURRICULUM VITAE

August 28th, 2016

PERSONAL

Name: Shimon Wdowinski

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Home Address: 21055 NE 37th Ave, Unit 406, Aventura, FL 33180

Current academic Rank: Associate Professor

Primary Department: Earth and Environment

Secondary or Joint Appointment: n/a

Citizenship: USA, Israel

Visa Type:

HIGHER EDUCATION

Institutional (institution; degree, date conferred):

Hebrew University, B.Sc. (Earth Sci), 1984

Hebrew University, M.Sc. (Geology), 1985

Harvard University, M.S. (Engineering), 1987

Harvard University, Ph.D. (Geophysics), 1990

Non-Institutional (description; dates)

Certification, licensure (description; board or agency; dates):

Shimon Wdowinski, Ph.D.

EXPERIENCE

Academic (institutions; rank/status; dates)

Florida International University; Associate Professor; 2016-present
 University of Miami; Research Professor; 2015-2016
 University of Miami; Research Associate Professor; 2005-2015
 University of Miami; Associate Post-doctorate; 2001-2005
 University of Miami; Adjunct Associate Professor; 1998-2001
 University of Miami; Adjunct Assistant Professor; 1995-1998
 Tel Aviv University; Geophysics Senior Lecturer; 1998-2004
 Tel Aviv University; Geophysics Lecturer; 1994-1998
 Scripps, UCSD, San Diego, IGPP, Post graduate Researcher; 1990-1993
 Harvard University, Cambridge; Earth Sci. Research & Teaching Assistant; 1985-1990

Non-Academic (employers; title; responsibilities; dates):

Geological Survey of Israel; Natural resources, Researcher; 1993-1994
 Geological Survey of Israel; Mapping, Geologist; 1984-1985

Military (branch; rank; responsibilities; dates):

Air Force (Israel Defense Forces) – Pilot Cadet – 1975-1976
 Artillery (Israel Defense Forces) – Lieutenant – 1976-1979
 Reserve (Israel Defense Forces) – Captain – 1980-2001

PUBLICATIONS

Books and monographs published:

Wdowinski, S. and S-H. Hong, Wetland InSAR: A review of the technique and applications, Edited by R.W. Tiner, M.W. Lang, and V.V. Klemas, Remote Sensing of Wetlands Applications and Advances, CRC Press, Pages 137–154, DOI: 10.1201/b18210-10, 2015.

Weinberger R., Z.B. Begin, N. Waldman, M. Gardosh, G. Baer, A. Frumkin, and S. Wdowinski, Quaternary rise of the Sedom diaper, Dead Sea Basin, in Enzel, Y., A. Agnon, and M. Stein, New frontiers in the Dead Sea paleoenvironmental research: Geol. Soc. Am., special paper 401, 33-35, 10.1130/2006.2401, 2006.

Naaman, S., L. Alperovich, S. Wdowinski, S. Hayakawa and E. Callais, Variation of the ionospheric, Comparison of simultaneous variations of the ionospheric total electron content and geomagnetic field associated with strong earthquakes, in: Seismo Electromagnetics: Lithospheric-Atmospheric-Ionospheric coupling, edited by M. Hayakawa and O.A Molchanov, TERRAPUB, Tokyo, 303-308, 2002.

Shimon Wdowinski, Ph.D.

Bock, Y., J. Zhang, P. Fang, J. Genrich, K. Stark, and S. Wdowinski, One year daily satellite orbit and polar motion estimation for near real time crustal deformation monitoring, in: *Developments in Astrometry and their impact on astrophysics and geodynamics*, Mueller I. I. and B. Kolaczek, eds., IAU, 279-284, 1993.

Juried or refereed journal articles and exhibitions:

2016 Wdowinski, S., R. Bray, B. P. Kirtman, and Z. Wu (2016), Increasing flooding hazard in coastal communities due to rising sea level: Case study of Miami Beach, Florida, *Ocean & Coastal Management*, Volume 126, Pages 1-8, ISSN 0964-5691, <http://dx.doi.org/10.1016/j.ocecoaman.2016.03.002>.

Wenliang Z., F. Amelung, M-P Doin, T. H. Dixon, S. Wdowinski, and G. Lin (2016), InSAR observations of lake loading at Yangzhuoyong Lake, Tibet: Constraints on crustal elasticity, *Earth and Planetary Science Letters*, V. 449, 240-245, ISSN 0012-821X, <http://dx.doi.org/10.1016/j.epsl.2016.05.044>.

Oliver-Cabrera, T. and S. Wdowinski, (2016), InSAR-Based Mapping of Tidal Inundation Extent and Amplitude in Louisiana Coastal Wetlands. *Remote Sens*, 8, 393.

Osmanoğlu, B., Sunar, F., Wdowinski, S., & Cabral-Cano, E. (2016). Time series analysis of InSAR data: Methods and trends. *ISPRS Journal of Photogrammetry and Remote Sensing*, 115, 90-102.

2015 Weber, J. C., H. Geirsson, J. L. Latchman, K. Shaw, P. La Femina, S. Wdowinski, M. Higgins, C. Churches, and E. Norabuena (2015), Tectonic inversion in the Caribbean-South American plate boundary: GPS Geodesy, Seismology, and Tectonics of the Mw 6.7 April 22, 1997 Tobago earthquake, *Tectonics*, 34, 1181–1194, doi:10.1002/2014TC003665.

Pacheco-Martínez, J.; Cabral-Cano, E.; Wdowinski, S.; Hernández-Marín, M.; Ortiz-Lozano, J.Á.; Zermeno-de-León, M.E. Application of InSAR and Gravimetry for Land Subsidence Hazard Zoning in Aguascalientes, Mexico. *Remote Sens*. **2015**, 7, 17035-17050.

Solano-Rojas, D., E. Cabral-Cano, A. Hernández-Espriu, S. Wdowinski, C. DeMets, L. Salazar-Tlaczani, G Falorni, and A. Bohane (2015) La relación de subsidencia del terreno InSAR-GPS y el abatimiento del nivel estático en pozos de la zona Metropolitana de la Ciudad de México. *Boletín de la Sociedad Geológica Mexicana* Volume: 67 Issue: 2 Pages: 273-283.

Shimon Wdowinski, Ph.D.

Brisco, B., K. Murnaghan, S. Wdowinski & Sang-Hoon Hong (2015): Evaluation of RADARSAT-2 Acquisition Modes for Wetland Monitoring Applications, *Canadian Journal of Remote Sensing*, 41, 431-439, DOI: 10.1080/07038992.2015.1104636

Hong, S.-H., H.-O. Kim, S. Wdowinski, and E. Feliciano (2015), Evaluation of Polarimetric SAR Decomposition for Classifying Wetland Vegetation Types. *Remote Sens.*, 7, 8563-8585.

Brisco, B., F. Ahern, S-H Hong, S. Wdowinski, K. Murnaghan, L. White, and D.K., Atwood (2015), Polarimetric decomposition of temperate wetlands at C-band, *IEEE J. Selected Topics in App. Earth Observations and Remote Sensing*, 8, 3585-3594, DOI 10.1109/JSTARS.2015.2414714.

Fattahi, H., F. Amelung, E. Chaussard, and S. Wdowinski (2015), Coseismic and postseismic deformation due to the 2007 M5.5 Ghazaband fault earthquake, Balochistan, Pakistan, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL063686.

2014 Hong, S-H, and S. Wdowinski, Multi-temporal, multi-track monitoring of wetland water levels in the Florida Everglades using ALOS PALSAR data with interferometric processing, *IEEE Geosciences and Remote Sensing Letters*, DOI 10.1109/LGRS.2013.2293492, 2014.

Feliciano, E., S. Wdowinski, and M. Potts, Assessing Mangrove Above-Ground Biomass and Structure using Terrestrial Laser Scanning: A Case Study in the Everglades National Park, *Wetlands*, DOI 10.1007/s13157-014-0558-6, 2014.

Xiao, X., S. Wdowinski, and Y. Wu, Improved Water Classification Using an Application-oriented Processing of Landsat ETM+ and ALOS PALSAR, *International Journal of Control & Automation*, 7 (11), 355-370, 2014.

Zhao, W., F. Amelung, T.H. Dixon, S. Wdowinski, and R. Malservisi, A method for estimating ice mass loss from relative InSAR observations: Application to the Vatnajökull ice cap, Iceland, *Geochem. Geophys. Geosyst.*, DOI 10.1002/2013GC004936, 2014.

Chaussard, E., S. Wdowinski, F. Amelung, and E. Cabral-Cano, Land subsidence in central Mexico detected by ALOS InSAR time-series, *Remote Sensing for Environment*, 140, 94-106, 2014.

Osmanoglu, B., T.Dixon, and S. Wdowinski, 3-D phase unwrapping for satellite radar interferometry, I: DEM generation, *IEEE Transactions on Geosciences and Remote Sensing*, DOI 10.1109/TGRS.2013.2247043, 2014.

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Hong, S-H, and S. Wdowinski, Double bounce component in cross-polarimetric SAR from a new scattering target decomposition, *IEEE Geosciences and Remote Sensing*, DOI 10.1109/TGRS.2013.2268853, 2014.

Yin, H., and S. Wdowinski, Improved detection of earthquake-induced ground motion with spatial filter: case study of the 2012 $M=7.6$ Costa Rica earthquake, *GPS Solutions*, DOI 10.1007/s10291-013-0353-5, 2014.

2013 Jin, S., van Dam, T. and S. Wdowinski, Observing and understanding the Earth system variations from space geodesy, *Journal of Geodynamics*, DOI 10.1016/j.jog.2013.08.001, 2013.

Wdowinski, S., S.-H. Hong, A. Mulcan, and B. Brisco. Remote-sensing monitoring of tide propagation through coastal wetlands. *Oceanography* 26(3):64–69, DOI 10.5670/oceanog.2013.46, 2013.

Kim, S-W, S. Wdowinski, F. Amelung, T. H. Dixon, and J-S Won, Interferometric coherence analysis of the Everglades wetlands, South Florida, *IEEE Geosciences and Remote Sensing*, DOI 10.1109/TGRS.2012.2231418, 2013.

Yang, Q., S. Wdowinski, and T.H. Dixon, Annual Variation of Coastal Uplift in Greenland as an Indicator of Variable and Accelerating Ice Mass Loss, *Geochem. Geophys.*, *Geosys*, DOI: 10.1002/ggge.20089, 2013.

Yin, H., S. Wdowinski, X. Liu, W. Gan, G. Xiao, B Huang, and S. Liang, Strong ground motion recorded by high-rate GPS of the 2008 $M_s=8.0$ Wenchuan earthquake, China, *Seismological Research Letter*, 87, 210-218, doi: 10.1785/0220120109, 2013.

2012 Sadeh, M., Y. Hamiel, A. Ziv, Y. Bock, P. Fang, and S. Wdowinski, Crustal deformation along the Dead Sea Transform and the Carmel Fault inferred from 12 years, of GPS measurements, *J. Geophys. Res.*, 117, B08410, 14 PP., doi:10.1029/2012JB009241, 2012.

Bock, Y., S. Wdowinski, A. Ferretti, F. Novali, and A. Fumagalli, Reply to comment by P. Teatini et al. on “Recent subsidence of the Venice Lagoon from continuous GPS and interferometric synthetic aperture radar”, *VOL. 13*, Q08011, 3 PP., doi:10.1029/2012GC004270, 2012.

Nof, R. N., A. Ziv, M.-P. Doin, G. Baer, Y. Fialko, S. Wdowinski, Y. Eyal, and Y. Bock, Rising of the lowest place on Earth due to Dead Sea water-level drop: Evidence from SAR interferometry and GPS, *J. Geophys. Res.*, 117, B05412, doi:10.1029/2011JB008961, 2012.

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Bock, Y., S. Wdowinski, A. Ferretti, F. Novali, and A. Fumagalli, Recent subsidence of the Venice Lagoon from continuous GPS and interferometric synthetic aperture radar, *Geochem. Geophys. Geosyst.*, 13, Q03023, doi:10.1029/2011GC003976, 2012.

Jiang, Y., S. Wdowinski, T. H. Dixon, M. Hackl, M. Protti, and V. Gonzalez, Slow slip events in Costa Rica detected by continuous GPS observations, 2002–2011, *Geochem. Geophys. Geosyst.*, 13, Q04006, doi:10.1029/2012GC004058, 2012.

Cigna F., Osmanoglu B., Cabral-Cano E., Dixon T.H., Ávila-Olivera J.A., Garduño-Monroy V.H., DeMets C., Wdowinski S. - *Monitoring land subsidence and its induced geological hazard with Synthetic Aperture Radar Interferometry: a case study in Morelia, Mexico*. *Remote Sensing of Environment*, DOI: 10.1016/j.rse.2011.09.005, 2012.

- 2011 Hong, S-H, and S. Wdowinski, Evaluation of the quad-polarimetric RADARSAT-2 observations for the wetland InSAR application, *Canadian Journal of Remote Sensing*, Vol. 37, Issue 5, pp. 484-492, 2011.

Osmanoglu, B., T.Dixon, S. Wdowinski, and E. Cabral-Cano, On the Importance of Path for Phase Unwrapping in Synthetic Aperture Radar Interferometry, *Applied Optics*, accepted, *Applied Optics*, Vol. 50, Issue 19, pp. 3205-3220, doi:10.1364/AO.50.003205, 2011.

Osmanoglu, B., T.Dixon, S. Wdowinski, E. Cabral-Cano, and Y. Jiang, Mexico City subsidence observed with Persistent Scatterer InSAR, *International Journal of Applied Earth Observation and Geoinformation*, doi:10.1016/j.jag.2010.05.009, 2011.

- 2010 Plattner, C., S. Wdowinski, T.H. Dixon, J. Biggs, Surface subsidence induced by the Crandall Canyon Mine (Utah) collapse: InSAR observations and elasto-plastic modeling, *Geophysical Journal International*, Vol 183, 1089-1096, doi: 10.1111/j.1365-246X.2010.04803.x, 2010.

Jiang, Y., T. Dixon, and S. Wdowinski, Accelerating Uplift in Greenland, Iceland and Svalbard, *Nature-Geosciences*, DOI: 10.1038/NCEO845, 2010.

Hong, S-H, S. Wdowinski, S-W Kim, and J-S Won, Multi-temporal monitoring of wetland water levels in the Florida Everglades using interferometric synthetic aperture radar (InSAR), *Remote Sensing for Environment*, 114, 2436-2447, 2010.

Kim, S-W, S. Wdowinski, F. Amelung, T. Dixon, S-J Won, and J-W Kim, Measurements and predictions of subsidence induced by soil consolidation using permanent scatterer InSAR and hyperbolic model, *Geophysical Research letters*, VOL. 37, L05304, doi:10.1029/2009GL041644, 2010.

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- Hong, S-H, S. Wdowinski, S-W Kim, Evaluation of TerraSAR-X observations for Wetland InSAR application, *IEEE Geosciences and Remote Sensing*, 48, 864-873, 2010.
- Gondwe, B.R.N., S.-H. Hong, S. Wdowinski, and P. Bauer-Gottwein, Hydrodynamics of the groundwater-dependent Sian-Ka'an wetlands, Mexico, from InSAR and SAR data, *Wetlands*, 30, 1-13, 2010.
- 2009 Wdowinski, S., Deep creep as a cause of the excess seismicity along the San Jacinto Fault: *Nature-Geosciences*, 2, 882-885, 2009.
- Wdowinski, S., and S. Eriksson, Geodesy in the 21st Century, *Eos Trans. AGU*, 90, 153-155, 2009.
- Hackl, M, R. Malservisi and S. Wdowinski, Strain rate patterns from dense GPS networks, *Natural Hazards and Earth System Sciences*, 9, 1177–1187, 2009.
- 2008 Kim, S.-W., S. Wdowinski, T.H. Dixon, F. Amelung, J. Won, J. Kim, InSAR-based Mapping of Surface Subsidence using JERS-1 and ENVISAT SAR Data in Mokpo City, Korea, *Earth and Planets Space*, 60, 453-461, 2008.
- Wdowinski, S., S.-W. Kim, F. Amelung, T. Dixon, F. Miralles-Wilhelm, and R. Sonenshein, Space-based detection of wetlands surface water level changes from L-band SAR interferometry, *Remote Sensing for Environment*, 112/3, 681-696, 2008
- 2007 Wdowinski, S., B. Smith, Y. Bock, and D. Sandwell, Diffuse intersesimic deformation across the Pacific-North America plate boundary, *Geology*, 35, 311-314, 2007.
- 2006 Dixon, T., F. Amelung, A. Ferretti, F. Novali, F. Rocca, R. Dokka, G. Sella, S. Kim, S. Wdowinski, D. Whitman, Subsidence and flooding in New Orleans, *Nature*, 441, 587-588, 2006.
- Wdowinski, S., Z. Ben-Avraham, R. Arvidsson, and G. Ekstrom, Seismo-tectonics of the Cyprian Arc, *Geophys. J. Int.*, 164, 176-181, 10.1111/j.1365-246X.2005.02737.x, 2006.
- 2004 Wdowinski, S., Y. Bock, G. Baer, L. Prawirodirdjo, N. Bechor, S. Naaman, R. Knafo, Y. Forrai, Y. Melzer, GPS Measurements of Current Crustal Movements along the Dead Sea Fault, *J. Geophys. Res.*, 109, 10.1029/2003JB002640, 2004b.
- Wdowinski, S., F. Amelung, F. Miralles-Wilhelm, T. Dixon, and R. Carande, Space-based measurements of sheet-flow characteristics in the Everglades wetland, Florida, *Geophys. Res. Lett.*, 31, L15503, 10.1029/2004GL020383, 2004a.

Shimon Wdowinski, Ph.D.

- 2003 Matmon, A., S. Wdowinski, and J. Hall, Morphological and Structural relations in the Galilee extensional domain, northern Israel, *Tectonophys.*, 371, 223-241, 2003.
- 2002 Baer, G., U. Schattner, D. Waches, D. Sandwell and S. Wdowinski, The lowest place on Earth is subsiding – an INSAR perspective, *Geol. Soc. Am. Bull.*, 114, 12-23, 2002.
- Pe'eri, S., S. Wdowinski, A. Stibelman, N. Bechor, Y. Bock, and M. van Domselaar, Current deformation across the Dead Sea Fault, as observed from three years of continuous GPS Monitoring, *Geophys. Res. Lett.*, 10.1029/2001GL013879, 2002.
- 2001 Wdowinski, S., Y. Bock, Y. Forrai, Y. Melzer and G. Baer, The GIL network of continuous GPS monitoring in Israel for geodetic and geophysical applications, *Isr. J. Earth Sci.*, 50, 39-47, 2001b.
- Sivan, D., S. Wdowinski, K. Lambach, E. Galili and A. Raban, Holocene sea-level changes along the Mediterranean coast of Israel, based on archaeological observations and numerical models, *Paleogeography, Paleoclimatology, Paleoecology*, 167, 101-117, 2001.
- Wdowinski, S., Y. Sudman and Y. Bock, Geodetic detection of active faults in southern Californai, *Geophys. Res. Lett.* 28, 2321-2324, 2001a.
- 2000 Genrich, J.F., Y. Bock, R. McCaffrey, L. Prawirodirdjo, C.W. Stevens, S.S.O. Puntodewo, C. Subarya, and S. Wdowinski, Distribution of slip at the Northern Sumatra Fault System, *J. Geophys. Res.*, 105, 28,327-28,342, 2000.
- 1998 Arvidsson, R., Z. Ben-Avraham, G. Ekstrom, and S. Wdowinski, Plate tectonics framework for the Mw=6.8, October 9, 1996, Cyprus earthquake and the seismic energy release of the Cyprean Arc, *Geophy. Res. Let.*, 25, 2241-2244, 1998.
- Wdowinski, S., A new class of transform plate boundary, *Phys. Chem. Earth*, 23, 7,775-7,783, 1998.
- 1997 Wdowinski, S., and E. Zilberman, Systematic analyses of the large scale topography and structure across the Dead Sea Rift, *Tectonics*, 16, 409-424, 1997.
- Bock, Y., S. Wdowinski, P. Fang, J. Zhang, J. Behr, J. Genrich, D. Agnew, F. Wyatt, H. Johnson, K. Hudnut, K. Stark, S. Dinardo, W. Young, and W. Gurtner, Southern California Permanent GPS geodetic array: Continuous measurements of crustal deformation, *J. Geophys. Res.*, 102, 18,013-18,034, 1997.

Shimon Wdowinski, Ph.D.

Zhang, J., Y. Bock, H. Johnson, P. Fang, S. Wdowinski, J. Genrich, J. Behr, Southern California Permanent GPS geodetic array: Error analysis of daily position estimates and site velocities, *J. Geophys. Res.*, 102, 18,035-18,056, 1997.

Wdowinski, S., Y. Bock, J. Zhang, and P. Fang, Southern California Permanent GPS geodetic array: Spatial filtering of daily positions for estimating coseismic and postseismic displacements induced by the 1992 Landers earthquake, *J. Geophys. Res.*, 102, 18,057-18,070, 1997.

Wdowinski, S., A theory of intraplate tectonics, *J. Geophys. Res.*, 103, 5037-5059, 1997.

1996 Wdowinski, S., and E. Zilberman, Kinematic modeling of large-scale structural asymmetry across the Dead Sea Rift, *Tectonophysics*, 266, 187-201, 1996.

1994 Wdowinski, S., and Y. Bock, The evolution of deformation and topography of high elevated plateaus: 1. Model, numerical analysis, and general results, *J. Geophys. Res.*, 99, 7103-7119, 1994b.

Wdowinski, S., and Y. Bock, The evolution of deformation and topography of high elevated plateaus: 2. Application to the Central Andes, *J. Geophys. Res.*, 99, 7121-7130, 1994a.

Puntodewo, S.S.O., R. McCaffrey, E. Calais, Y. Bock, J. Rais, C. Subarya, R. Poewariardi, C. Stevens, J. Genrich, Fauzi, P. Zwick and S. Wdowinski, GPS measurements of crustal deformation within the Pacific-Australia plate boundary zone in Irian Jaya, Indonesia, *Tectonophysics*, 237, 141-153, 1994.

1993 Bock, Y., A. C. Agnew, P. Fang, J. F. Genrich, B. H. Hager, T. A. Herring, R. W. King, S. Larsen, J. B. Minster, K. Stark, S. Wdowinski, and F. K. Wyatt, Detection of coseismic deformation in Southern California using continuous Global Positioning System measurements, *Nature*, 361, 337-340, 1993.

1992 Wdowinski, S. and G. J. Axen, 1992, Isostatic Rebound Due to Tectonic Denudation: A Viscous Flow Model of a Layered Lithosphere, *Tectonics*, 11, 303-315, 1992.

Wdowinski, S., Dynamically supported trench topography, *J. Geophys. Res.*, 97, 17,651-17,656, 1992.

1991 Wdowinski, S. and R. J. O'Connell, Deformation of the Central Andes (15-27°S) derived from a flow model of subduction zones, *J. Geophys. Res.*, 96, 12,245-12,255, 1991.

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- 1990 Wdowinski, S. and R. J. O'Connell, On the Choice of Boundary Conditions in Continuum Models of Continental Deformation, *Geophys. Res. Lett.*, 17, 2413-2416, 1990.
- 1989 Wdowinski, S, R. J. O'Connell, and P. England, Continuum models of continental deformation above subduction zones: Application to the Andes and the Aegean, *J. Geophys. Res.*, 94, 10,331-10, 346, 1989.

19. Other works, publications and abstracts:

Unreviewed Articles:

- 2012 Wdowinski, S., New insights into the great rumble, WWW.RESEARCHMEDIA.EU, 2012.
- 2006 Wdowinski, S., S. Kim, F. Amelung, and T. Dixon, InSAR-based hydrology of wetlands, *ASF News and Notes*, 2006.
- 2000 Kempler, D. and S. Wdowinski, Closing the Sea (in Hebrew), *Galileo*, 39, 2000, 38-43.
- 1999 Wdowinski, S., Y. Bock Y. Melzer, Y. Forrai, G.Baer and D. Levitte, A network of permanent GPS stations for estimating seismic hazard (in Hebrew), *Et-Moded*, 1999, 12, 14-15.

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PROFESSIONAL

Funded Research Performed (include all grants received in the last five years, identifying the principal investigator and the amounts and dates of the awards):

- 2016-2018 NSF, \$235,000 for studying “Collaborative research: Detection and mechanics of sinkhole activities in central Florida” [PI].
- 2014-2016 NSF, \$90,000 for studying “Space based detection of sinkhole activity in central Florida” [PI].
- 2013-2016 NASA, \$521,928 for studying “A new Mass Balance estimation method from Altimetry and InSAR: Application to the Greenland Ice Sheet and Arctic Ice Caps” [CoPI].
- 2013-2016 NASA, \$290,745 for studying “Flood Regimes and Carbon Cycling in Anthropogenic Landscapes of the Bolivian Amazon” [CoPI].
- 2012-2018 NSF, \$5,879,998 for studying “FCE III: Coastal Oligotrophic Ecosystems Research” [CoPI – My share is \$20,070].
- 2012-2015 NASA, \$453,805 for studying “Applications of InSAR Time Series Imagery for Subsidence Hazards and Water Resources Exploitation in Four Mexican Metropolitans” [PI].
- 2012-2015 NASA, \$436,519 for studying “Development of Advanced Algorithms for 3-D InSAR Unwrapping using Non-Linear Filters” [PI].
- 2012-2013 UM collaborative research exchange forum, \$80,000 for studying “High-Resolution InSAR for Geo-Engineering Applications ” [CoPI].
- 2010-2012 NSF, \$28,206 for studying “RAPID: Monitoring postseismic crustal deformation in Haiti with TerraSAR-X observations” [PI].
- 2010-2011 UM Provost award, \$14,616 for studying “Space-based monitoring of forest and wetland 3-D vegetation structure” [PI].
- 2009-2010 NSF, \$75,000 for studying “Acquisition of a Linux computer cluster for Space Geodetic Research” [CoPI].
- 2008-2013 NASA, \$4,999,999 for studying “Water-SCAPES: Science of Coupled Aquatic Processes in Ecosystems from Space” [CoPI – My share is \$749,966].
- 2008-2011 NASA, \$299,188 for studying “Integration of InSAR time-series with continuous GPS. Application to the Western Basin and Range” [CoPI].
- 2007-2011 NASA, \$84,000 for studying “Determining surface subsidence characteristics in urban areas by means of persistent scatterer InSAR”
- 2007-2008 South Florida Water Management District, \$47,160 for providing “Space-based remote sensing of water level changes – Interferometric Synthetic Aperture Radar measurements” [PI].
- 2007 South Florida Water Management District, \$23,580 for providing “Space-based remote sensing of water level changes – Interferometric Synthetic Aperture Radar measurements” [PI].

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- 2007 Florida International University, \$71,100 for providing “Space-based hydrology of the Everglades” [PI].
- 2004-2006 National Institute for Water Research, \$158,000 for studying “Wetland Hydrology from Space” [PI, 2 coPIs].
- 2000-2001 Israel Ministry of Infrastructure, \$10,000 for studying “Neotectonic structure and recent tectonic activity in the lower Jordan Valley”. [PI., no coPIs].
- 2000-2001 Gordon Center for Energy Studies (Tel Aviv University), \$2500 for studying “Evaluating the petroleum potential of the southeastern Mediterranean Basin”. [PI., no coPIs].
- 2000-2001 Sackler Foundation, Tel Aviv University, \$6600 for “Monitoring crustal deformation across the Dead Sea Fault using GPS observation”. [PI., no coPIs].
- 2000-2001 Survey of Israel, \$40,000 for studying “Establishment of automated near real-time system for downloading GPS data from the GIL network permanent stations. [PI., no coPIs].
- 1999-2003 Israel Space Agency, \$230,000 for studying “Establishment of an integrated INSAR-GPS system for studying 10 years of crustal deformation along the Dead Sea Fault System: 1991-2001. [coPI., received \$80,000; the PI and another coPI received the other 2/3].
- 1999-2000 Sackler Foundation, Tel Aviv University, \$10,000 for studying “Mapping atmosphere water vapor content using GPS observations”. [PI., no coPIs].
- 1999-2000 Tel Aviv University, \$7,000 for studying “Mapping atmospheric water vapor content using GPS observations”. [PI., no coPIs].
- 1997-2000 Israel Space Agency, \$200,000 for studying “Establishment of Global Positioning System Infrastructure in Israel for Geodetic and Geophysical Applications”. [PI., 1 coPI, the PI received the entire award].
- 1997-2000 Survey of Israel, \$150,000 for studying “Establishment of Global Positioning System Infrastructure in Israel for Geodetic and Geophysical Applications”. [PI., 1 coPI, the PI received the entire award].
- 1997-1998 Natural Center for Cooperation between Science and Archaeology, \$7,600 studying “Holocene sea level changes”. [coPI., received ½ of award; the PI received the other ½].
- 1997-1998 Tel Aviv University, \$3,500 studying “A new theory of intraplate tectonics”. [PI., no coPIs].
- 1996-1997 Tel Aviv University, \$5,000 studying “Numerical models of continental extension”. [PI., no coPIs].
- 1996-1997 Tel Aviv University, \$3,200 studying “Detection of coseismic deformation induced by the 1995 Nuweiba earthquake”. [PI., no coPIs].
- 1996-1997 Gordon Center for Energy Studies (Tel Aviv University), \$4,000 studying “Seismic hazard assessments using GPS observations”. [PI., no coPIs].

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- 1996-1997 Keshet (Tel Aviv University), \$14,000 for studying “Geodetic measurements using GPS observations”. [PI., no coPIs].
- 1995-1997 Israel Ministry of Energy, \$20,000 for studying “Preliminary calculations of Israel-Sinai plate velocity using GPS data”. [PI., no coPIs].
- 1994-1995 Gordon Center for Energy Studies (Tel Aviv University), \$2000 for studying “The development the Dead Sea Rift and its implications on oil prospect in the Dead Sea Basin”. [PI., no coPIs].

Editorial responsibilities:

- Journal of Geophysical Research (JGR), associate editor, 2009-2015.
- Tectonophysics, associate editor, 2002-present.
- Journal of Geodynamics, Guest editor for Special Issue on Geodetic Earth System, 2012-present.
- Israel Journal of Earth Sciences, guest editor for a special issue on “Geodetic studies in Israel”, 2000-2001.
- Israel Journal of Earth Sciences, associate editor, 1999-2005.
- Israel Geological Society, 1999-2000, organizing committee.

Professional and Honorary Organizations (members; officer; date):

- Society of Wetland Scientists, 2005-2012.
- American Geophysical Union, 1986-present
- Israel Geological Society, 1983-2004.

- UNAVCO – Geodetic Data Services Advisory Committee, Chair (2015-present).
- UNAVCO – WInSAR Advisory Committee, member (2011-2014).
- UNAVCO – Education & Outreach Advisory Committee, Chair (2010-2012).
- UNAVCO – Board member (2008-2009).
- MAeSUREs - Advisory Committee, member (2009-2014).
- Served as an expert in the two panels of the Israeli parliament (Knesset) discussing Earthquake mitigation and preparations (2000-2001).
- International Association of Seismology and Physics of the Earth’s Interior (IASPEI) Commission on Geodynamics and Tectonophysics, 1995-1999.
- International Association of Geodesy (IAG) Special Study Group, Continuous GPS networks, 1995-1999.

24. Honors and Awards:

- 1990-1992 Ida and Cecil Green scholarship for postgraduate research in Geophysics, IGPP, Scripps Institution of Oceanography, UCSD.

25. Post-Doctoral Fellowships:

- 1990-1993 Post-graduate studies, Scripps Institute of Oceanography, UCSD Under the supervision of Dr. Y. Bock

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TEACHING

Teaching Awards Received: n/a

Teaching Specialization (Note briefly courses taught, new courses developed, innovative or experimental teaching, etc.)

University of Miami,

Geophysics, 2005-06, 2007-08, 2008-09

Structural Geology, 2010-11, 2011-12

Natural disasters: Hollywood versus reality, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11

Mathematical methods for geo-scientists, 2007-08, 2009-10, 2010-11, 2011-12, 2013-14,
2015-16

Hydrological Hazards, 2015-16

Tel Aviv University, 1994-2004 (courses taught)

Physics of the earth, 1994-95

Structural geology, 1995-96; 1996-97; 1997-98; 1998-99; 1999-2000, 2000-2001, 2003-2004

Potential methods, 1995-96.

Mathematical methods for geophysicists, 1995-96; 1996-97; 1997-98; 1998-99; 1999-2000.

Geodynamics, 1996-97; 1998-99; 2000-2001.

Tectonics Seminar, 1995-96; 1996-97; 1997-98; 1998-99; 1999-2000; 2000-2001; 2003-2004

Principles and applications of GPS technology, 1997-98; 1998-99; 2000-2001.

Geology of Israel, 1998-1999; 1999-2000; 2000-2001.

SERVICE

University Committee and Administrative Responsibilities:

Member in the undergraduate and M.Sc curriculum committees at the department of Earth and Planetary Sciences, Tel Aviv University: 1998-2001.

Chair of the housing and internet committees at the department of Earth and Planetary Sciences, Tel Aviv University: 1997-2000.

Coordinating Geophysical seminar series at Tel Aviv University: 1995-1998.

Coordinating CSTARS seminar series: 2004-05, 2005-06, 2006-07

Coordinating Geotopics seminar series: 2005-06, 2006-07.

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Organizing CSTARS “Height” workshop: 2006.
Member in the CSTARS Internal Advisory Committee 2007-.

Community Activities:

Serve on the board of directors of UNAVCO 2008-2009.
Serve on UNAVCO’s Education and outreach Advisory Committee, 2010-2011.
Serve on UNAVCO’s WInSAR Advisory Committee, 2010-2014.
Chair the UNAVCO’s Education and outreach Advisory Committee, 2012-2013.
Chair the UNAVCO’s Geodetic Data Services Advisory Committee, 2015-present.

Served as a member in the Sea Level Rise working group of the advisory forum
“Southeast Florida Regional Climate Compact”.
Served on two Miami Beach-UM-FIU working groups that seek solutions for the
increasing sea level hazard in Miami Beach.

Co-organizing and delivering “Teaching Geodesy in the 21st century” workshop: 2010.

Providing special lecture on Earth Sciences at K-8 school (Perrine Elementary, Coral Reef
Montessori Academy, South Miami High school)
Providing special lecture on Earth Sciences at High Schools (South Miami High School,
Archimedean Academy)