

# AARON LEVINE

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## **Work Experience:**

### **NOAA/PMEL**

National Research Council Postdoctoral Research Fellow, September 2014-present

### **University of Hawaii at Manoa, Department of Meteorology**

Graduate Research Assistant 2006-2014 to Professor Jin on linear El Niño theory

Teaching Assistant Fall 2009, MET 320, Programming for Meteorologists

### **University of Chicago, Geophysical Sciences Department**

Research Assistant 2004-2006 to Professor Nakamura on the correlation between stratospheric temperature and the ozone hole

### **The Aerospace Corporation, El Segundo, California**

Summer 2004: Technical Support, Defense Meteorological Satellite Program (DMSP). Responsible for collection and presentation of known data on the vertical distribution of water vapor in the atmosphere for the calibration and validation of (SSM/I/S) Special Sensor Microwave Imaging Sensor

Summer 2001: Laboratory Technician, photonics laboratory. Responsible for conducting a LiDAR experiment in order to create higher resolution imaging for more accurate mapping

Summer 1999: Assisted in the development of a high school curriculum in meteorology and space weather

## **Education:**

### **University of Hawaii Department of Meteorology**

#### **Academic:**

PhD, Summer 2014

Dissertation Topic: "A Systematic Approach to Quantifying the Noise-ENSO Interaction and its Effect on Extreme El Niño Events"

Advisor: Fei-Fei Jin

MS, Fall 2008

Thesis Title: "Noise Induced Instability in the ENSO Recharge Oscillator"

Advisor: Fei-Fei Jin

National Weather Service Fellowship 2006-2008

NCAR CESM Tutorial August 2011

The Hebrew University of Jerusalem, The Institute for Advanced Studies winter school on Reducing the uncertainty in the prediction of global warming, January 2009.

CLIVAR ENSO Summer School June 2008

#### **School Service:**

Student Representative Meteorology Faculty Search Committee Fall 2011

University of Hawaii Graduate Student Organization

Parliamentarian 2012-2014

GSO representative, Awards Committee 2012-2014

GSO representative, Manoa Assessment Committee, 2013-2014

Treasurer 2011-2012

GSO representative, Manoa Excellence Team 2011-2012

GSO representative, Manoa Assessment Committee, 2012

GSO representative, Manoa Fee Committee 2011-2012

Grants and Awards Committee Chair 2010-2011

Meteorology department representative 2007-2010

New Graduate Student Orientation

Organizing Committee member 2007-2011

Volunteer Coordinator, 2008

Co-Chair, 2009

## University of Chicago:

### Academic:

BS with Honors in Geophysical Sciences and a BA in Physics, June 2006

Honors Thesis Title: "The Effect of Solar Irradiance and Southern Stratospheric Temperature on the Size of the Ozone Hole"

Advisor: Noburu Nakamura

GPA 3.15

Dean's List 2005-2006 academic year

### School Service:

Pierce Tower Council-- Dorm programming committee

President 2004-2006

Treasurer 2003-2004

Hillel Jewish Student Kehilah -- The Jewish Student's Association

Vice-Chair 2005-2006

Secretary 2004-2005

Shorey House Vice President/Treasurer 2005-2006

### Publications:

Levine, A. F. Z. and M. J. McPhaden (2015). *The annual cycle in ENSO growth rate as a cause of the spring predictability barrier*. Geophys. Res. Lett., 42, doi:10.1002/2015GL064309.

Levine, A. F. Z. and F. F. Jin (2015). *A simple approach to quantifying the noise-ENSO Interaction. Part I: Deducing the state-dependency of the windstress forcing using monthly mean data*. Clim. Dyn. DOI 10.1007/s00382-015-2748-1

Levine, A. F. Z., F. F. Jin and M. Stueker (2015). *A simple approach to quantifying the noise-ENSO Interaction. Part II: The Role of the Warm-Pool Edge and Equatorial Zonal Wind Anomalies*. Clim. Dyn. Revised.

Levine, A. F. Z., F. F. Jin and M. J. McPhaden (2015). *Super Noise-Super El Nino: How Stochastic Forcing Creates Extreme El Nino events*. J. Climate. To Be Submitted.

Levine, A. F. Z. and F. F. Jin (2010). *Noise Induced Instability in the ENSO Recharge Oscillator*. J. Atmos. Sci. 67:2010, 529-42.

Ma, J., S. C. da Silva, A. Levine, Y. Yang, P. Fuentes, L. Zhou, C. Tu, J. Hu, I. M. S. Jayawardena, A. Pessi and D. Carlis (2009). *Student proposed cruise captured wakes of Oahu and Kauai Islands*. Bull. Am. Met. Soc. 90: 2009, 1073-7.

"The Distribution of Water Vapor in the Atmosphere", DMSP Technical Report #9302004, Aaron Levine, August 2004

### Presentations:

Levine, A. F. Z. and M. J. McPhaden (2016). *The Atlantic as a Driver of the Multidecadal ENSO-Tropical Pacific Annual Cycle Relationship*. Ocean Sciences Meeting. Poster

Levine, A. F. Z., F. F. Jin, and M. J. McPhaden (2015). *State Dependent Noise Forcing and Extreme El Niño Events*. AGU Fall Meeting. Presentation.

Levine, A. F. Z. and M. J. McPhaden (2015). *The Interaction of Westerly Wind Bursts and the Spring Predictability Barrier in Determining the Magnitude of the 1997/98, 2014/15, and current El Niño events*. AGU Fall Meeting. Poster.

Levine, A. F. Z. *The Interaction of Westerly Wind Bursts and El Nino and its Impact on El Niño Forecasting*. Department Seminar, Department of Atmospheric Sciences, National Taiwan University. November 2015.

- Levine, A. F. Z. and M. J. McPhaden (2015). *El Niño and the Spring Predictability Barrier*. Fourth CLIVAR Workshop on the Evolution of ENSO in Climate Models. *Invited*
- Levine, A. F. Z. and M. J. McPhaden (2015). *The Effect of an Annually Varying Growth Rate on ENSO in a Simple Linear Model*. AGU Fall Meeting
- Levine, A. F. Z. *Quantifying State-Dependent Westerly Wind Bursts and their Effect on Extreme El Niño Events*. Atmospheric and Climate Dynamics Seminar, Department of Atmospheric Sciences, University of Washington. October 2014.
- Levine, A. F. Z. and F. F. Jin (2014). *The Evolution of the Coupled Ocean-Atmosphere Processes Involved in Multiplicative Noise Forcing of ENSO*. AGU Ocean Sciences meeting.
- Levine, A. F. Z. and F. F. Jin (2013). *Measuring the Windstress Multiplicative Noise Forcing of ENSO and its Impact on Extreme El Niño Events*. AGU fall meeting.
- Levine, A. F. Z. and F. F. Jin (2012). Poster on *Instability's Role in ENSO variability in the CCSM4 Pre-Industrial Control Run*. AGU fall meeting
- Levine, A. F. Z. and F. F. Jin (2012). Poster on *The Relationship of ENSO and the tropical mean state and the influence of external forcing*. Workshop on Tropical Dynamics and the MJO
- Levine, A. F. Z. and F. F. Jin (2008). Poster on *Noise Induced Instability in the ENSO Recharge Oscillator*. AGU fall meeting.

Reviewer for Journal of Climate, Climate Dynamics, Geophysical Research Letters, Scientific Reports

### **Grants Awarded:**

NRC Research Associate Program, Postdoctoral Research Fellowship, 2014-present  
Computational and Information Systems Laboratory, Large Computing Request, 2010-2012. Co-PI: Fei-Fei Jin.  
University of Hawaii at Manoa, Department of Meteorology National Weather Service Fellowship 2006-2008

### **Skills:**

Programming experience in IDL, Visual Basic, Python, Fortran, MatLab, Ferret, LaTeX, Mathematica and LabView.

### **References:**

Fei Fei Jin  
Professor, Department of Meteorology, University of Hawaii-Manoa  
(808) 956-4645  
jff@hawaii.edu

Duane Stevens  
Professor, Department of Meteorology, University of Hawaii-Manoa  
(808) 956-2564  
dstevens@hawaii.edu

Michael J. McPhaden  
Senior Scientist, Pacific Marine Environment Laboratory, National Oceanic and Atmospheric Administration  
(206) 526-6783  
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Kevin Hamilton  
Retired Professor, Department of Meteorology and International Pacific Research Center, University of  
Hawaii-Manoa  
kph@hawaii.edu