

Postdoctoral Associate – Climatology, Meteorology and Oceanography. From 2011 I have been working as a research scientist in the field of Climate/Atmospheric Science in universities in the United States and Australia. I have performed extensive calculations using global geophysical datasets, including satellite data, and a wide range of climate models (atmosphere and ocean). I am a mathematician and a climate scientist with a huge passion for the natural environment. Hard working with attention to detail. I am also a reviewer to a number of per-review scientific journals: Journal of Climate, Climate Dynamics, Nature Geoscience, and Geophysical Research Letters.

Fields of Expertise:

- ✓ Mathematics
- ✓ Climate/Meteorology/Oceanography
- ✓ Large Geophysical Datasets
- ✓ Model simulations (supercomputers)
- ✓ Programing Languages (Matlab, Python, Fortran)

PROFESSIONAL & ACADEMIC EXPERIENCE AND ACHIVEMENTS

**University of NEW SOUTH WALES, Climate Change Research Centre
Sydney/Australia • 11/2015 -present
POSTDOCTORAL RESEARCH ASSOCIATE**

Important Achievements

- Improve the simulation of the Saharan mid-level clouds using the Weather Research Forecast atmospheric model (work in progress, will be presented in Vienna in April 2018).
- The first team to run a high resolution regional atmospheric model for past-climate simulations.
- Prove that the proper simulation of the Mid-Holocene northward shift of the African monsoon depends on the ability of the atmospheric model to capture the mid-level Saharan cloud layer.
- Proved that the recently observed poleward expansion of the subtropical dry zone is not entirely driven by anthropogenic global warming and it is partly the result of natural variability.

**RUTGERS UNIVERSITY, Dept. of Environmental Sciences • NEW JERSEY/USA • 09/2011 -07/2014
POSTDOCTORAL RESEARCH ASSOCIATE**

Important Achievements

- Provide modeling evidence that the Mid-Holocene south-north shift of the South Pacific Convergence Zone is the result of changing sea surface temperatures and a change in the strength of the Australian monsoon.
- Conduct idealized model experiments to show that the oscillations in Earth's orbit have an effect on both the exchange in heat transport between the earth's hemispheres as well as the transport of heat from the equator to the earth's poles.
- Create a conceptual mathematical model to calculate the decay time scale of soil moisture anomalies, which can be used in long-term weather forecasting.

PUBLICATIONS (ARTICLES IN PER-REVIEW JOURNALS)

- **Mantsis, D. F.**, B. R. Lintner, K. L. Findell, and P. Gentine 2018: Soil moisture persistence in the GFDL climate model. About to submit (can be acquired upon request).
- **Mantsis, D. F.**, S. Sherwood, R. Allen, and L. Shi, 2017: Natural variations of tropical width and recent trends. *Geophys. Res. Letters*, 10.1002/2016GL072097.

- Vishal, D., S. Sherwood, O. Geoffroy, and **D. F. Mantsis**, 2017: The role of Nonlinear Drying above the Boundary Layer in the Mid-Holocene African Monsoon. *J. Climate*.
- **Mantsis, D. F.**, Benjamin R. Lintner, Anthony J. Broccoli, Michael P. Erb, Amy C. Clement, and Hyo-Seok Park, 2014: The response of large-scale circulation to obliquity induced changes in meridional heating gradients. *Journal of Climate*, vol. 27, 5504-5516.
- **Mantsis, D. F.**, B. Lintner, A. J. Broccoli, and M. Khodri, 2013: Mechanisms of Mid-Holocene precipitation change in the South Pacific Convergence Zone. *Journal of Climate*, vol. 26.
- **Mantsis, D. F.**, A. C. Clement, B. Kirtman, A. J. Broccoli, and M. P. Erb, 2013: Precessional cycles and their influence on the North Pacific and North Atlantic summer anticyclones. *Journal of Climate*, vol. 26, 4596-4611.
- **Mantsis, D. F.**, A. C. Clement, A. J. Broccoli, and M. P. Erb, 2011: Climate feedbacks in response to changes in obliquity. *Journal of Climate*, vol. 24, 2830-2845.
- **Mantsis, D. F.**, and A. C. Clement, 2009: Simulated variability in the mean atmospheric meridional circulation over the 20th century. *Geophysical Research Letters*, vol. 36, L06704.

ORAL PRESENTATIONS

- **Mantsis, D. F.**, and S. Sherwood: Mid-level clouds over the Sahara and their role during the greening of the Sahara during the Mid-Holocene. EGU annual meeting, Vienna, April 2018.
- **Mantsis, D. F.**, B. R. Lintner, and K. Findell: Soil moisture memory within the GFDL CM2.1 model. American Meteorological Society annual meeting, Atlanta, February 2014.
- **Mantsis, D. F.**, A. C. Clement: Precessional cycles and the remote influence on the Northern Hemisphere anticyclones. Environmental Sciences, Rutgers University, February 2012.
- **Mantsis, D. F.**, and A. C. Clement: Orbital induced climate change. NASA Goddard Institute of Space Studies, New York, December 2011.
- **Mantsis, D. F.**: Climate feedbacks in response to changes in obliquity. NCAR, Boulder, Colorado, April 2011.

I have also presented posters in a number of international scientific meetings: European Geophysical Union meeting in Vienna (2017), American Geophysical Union meeting in San Francisco (2008, 2009, 2010, 2012), American Meteorological Society meeting in Orlando (2008).

EDUCATION

PhD in Meteorology and Physical Oceanography

UNIVERSITY OF MIAMI | 2006 – 2011 | MIAMI/USA

Thesis: Atmospheric response to orbital forcing and 20th century sea surface temperature

Professor: Dr. Amy C. Clement

Granted a five-year research/teaching assistantship (2006-2011) from the University of Miami

Master of Science in Meteorology and Climatology

ARISTOTLE UNIVERSITY OF THESSALONIKI | 2003 – 2006 | THESSALONIKI/GREECE

Dissertation: On the study of wind vector characteristics in N. Greece, for implementation of wind energy program

Professor: Dr. Karakostas Theodore

I was awarded a two-year scholarship (2003-2005) from the Foundation of National Scholarships.

Bachelor Degree in Mathematics

ARISTOTLE UNIVERSITY OF THESSALONIKI | 1996 – 2001 | THESSALONIKI/GREECE

PERSONAL INFORMATION

English Level: Excellent Academic Level

Place of Birth: Oradea, Romania (25/06/1976)

Romanian: Excellent

Nationality: Greek

References available upon request