

Karin Ardon-Dryer

Assistant professor

Department of Geosciences, Atmospheric Science Group
Texas Tech University
3003 15th street, MCOM Room 1207
Box 41053, Lubbock, TX 79409

Email: Karin.ardon-dryer@ttu.edu

Phone: 806-834-5214

Website - <http://www.atmo.ttu.edu/karinard/>

EDUCATION

Tel Aviv University - Tel Aviv, Israel **Oct 2006 – Jun 2012**

Ph.D. Department of Geophysics, Atmospheric and Planetary Sciences, and the Porter School of Environmental Studies.

Thesis: “Ice nuclei, their concentration, and efficiency in clean and polluted air and their effects on clouds and precipitation”.

Advisor: Prof. Zev Levin.

Ben Gurion University – Beer Sheva, Israel **Oct 2003 – Jan 2006**

MA. Department of Geography and Environmental Development

Thesis: “Dynamic and Ecology processes of the Ashdod–Nizzanim Nebkha Dunes”.

Advisors: Prof. Haim Tsoar and Prof. Dan Blumberg.

Ben Gurion University – Beer Sheva, Israel **Oct 2000 – Jul 2003**

BA. Department of Geography and Environmental Development.

Graduated **Summa Cum Laude**.

RESEARCH EXPERIENCE

Texas Tech University – Lubbock, TX **Sep 2017 – Present**

Assistant Professor in the Department of Geosciences, Atmospheric Science Group.

Harvard University– Boston, MA **Sep 2015 – Aug 2017**

Postdoctoral Fellow in the Department of Systems Biology, Harvard Medical School in Boston.

- Conducted research on the effects of atmospheric aerosols from different sources (e.g. dust storms) on health.
- Collaborated with Professor Koutrakis from the Department of Environmental Health at Harvard School of Public Health on the aerosol-health project.
- Collaborated with other group members and assisted on different aspects of their research projects.
- Designed and implemented an adaptation of existing lab equipment by adding a multi-sensor measurement setup (CO₂, Temperature, and Humidity).

Massachusetts Institute of Technology – Cambridge, MA **Sep 2012 – Aug 2015**

Postdoctoral Research Associate in the Department of Earth, Atmospheric and Planetary Sciences.

- Led three research projects:
 - Droplets collection efficiency experiment; based on a single droplets basis.
 - Designed and tested a chamber to assess contact-freezing process.
 - Assessed the ability to size select dry disperse mineral dust in the laboratory.
- Trained students in the group on a variety of equipment's.
- Managed the lab and the group while the PI was on sabbatical.

Weizmann Institute – Rehovot, Israel **Jan 2012 – Jul 2012**

Postdoctoral Research Associate in the Department of Environmental Sciences

- Oversaw the transfer of scientific equipment between research institutes and trained the students on how to operate it.
- Maintained inter departmental groups collaboration and facilitated atmospheric particles sampling preparation for a field campaign.

Ben Gurion University – Beer Sheva, Israel **2005 - 2006**

Research Assistant in the Earth and Planetary Image Facility (EPIF)

- Served as EPIC lab administrator.
- Analyzed and adapted satellite, radar images, and aerial photographs for a variety of research projects.

TEACHING EXPERIENCE

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2022**

Texas Tech University – ATMO 5302 - Weather, Climate, and Application **Spring 2022**

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2021**

Texas Tech University – ATMO 1300 - Introduction to Atmospheric Science **Spring 2021**

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2020**

Texas Tech University – ATMO 5302 - Weather, Climate, and Application **Spring 2020**

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2019**

Texas Tech University – ATMO 1300 - Introduction to Atmospheric Science **Spring 2019**

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2018**

Mexico, National Autonomous University of Mexico **March 2018**

Invited to serve as an instructor at the Aerosol cloud interaction class in The Centro de Ciencias de la Atmósfera at the National Autonomous University of Mexico, Mexico.

Texas Tech University – ATMO 5302 - Weather, Climate, and Application **Spring 2018**

Texas Tech University – ATMO 3301 - Weather, Climate, and Human Activities **Fall 2017**

Massachusetts Institute of Technology – Cambridge, MA **Fall 2014**

Instructor in Experimental Atmospheric Chemistry at the Department of Earth, Atmospheric and Planetary Sciences.

Massachusetts Institute of Technology – Cambridge, MA **Spring 2013 & 2014**

Guest lecturer in Aerosol and Cloud Microphysics and Chemistry course at the Department of Earth, Atmospheric and Planetary Sciences.

Tel Aviv University – Tel Aviv, Israel **2009 – 2011**

Teaching assistant at the Porter School of Environmental Studies. Class T.A: Environmental problems in Israel, and Environmental projects - writing a research proposal.

China Meteorological Administration Training Centre - Beijing, China **2008 - 2011**
Served Three times as an instructor at the International Training Course on Weather Modification, part of China Meteorological Administration Training Center and Israel Meteorological Service.

Ben Gurion University - Beer Sheva, Israel **2003 – 2005**
Teaching assistant at the Department of Geography and Environmental Development: Class T.A: Geomorphology, Geomorphology of Planets, and Statistical analysis methods

PUBLICATIONS

1. **Ardon-Dryer, K.** and Kelley, M. C.: Particle size distribution and particulate matter concentrations during synoptic and convective dust events in West Texas, *Atmos. Chem. Phys.*, 22, 9161–9173, <https://doi.org/10.5194/acp-22-9161-2022>, 2022.
2. Tong, D. Gorris, M. Gill, T.E. **Ardon-Dryer, K.** Wang, J., and Ren L. Dust Storms, Valley Fever, and Public Awareness, *GeoHealth*, 6, e2022GH000642, <https://doi.org/10.1029/2022GH000642>, 2022.
3. Starkey, J.C. Koerber, A, Cummins, R.G. **Ardon-Dryer, K.** Eko, L Kee, K.F. Challenges and Threats to Quality in Scholarly Knowledge Production: Views of Selected Stakeholders from 17 Countries. *Discov Educ.* 1, 7. <https://doi.org/10.1007/s44217-022-00007-w>, 2022.
4. Sayahi, T., Workman, A.D., Kelly, K.E., **Ardon-Dryer, K.**, Presto, A.A., and Bleier, B.S. Aerosol Generation During Nasal Airway Instrumentation, *Otolaryngol Head Neck Surg*, 3;1945998221099028. <https://doi:10.1177/01945998221099028>, 2022.
5. **Ardon-Dryer, K.**, Kelley, M.C., Xueting, X., and Dryer, Y.: The Aerosol Research Observation Station (AEROS), *Atmos. Meas. Tech.*, <https://doi.org/10.5194/amt-2021-270>, 2022.
6. **Ardon-Dryer, K.** Chmielewski, V, Burning E., and Xueting X.: Changes of Electric Field, Aerosol, and Wind Covariance in Different Blowing Dust Days in West Texas, *Aeolian Research*, 54, 100762, <https://doi.org/10.1016/j.aeolia.2021.100762>, 2022.
7. Kelley, M.C., and **Ardon-Dryer, K.**, Analyzing Two Decades of Dust Events on the Southern Great Plains Region of West Texas, *Atmospheric Pollution Research*, 101091, <https://doi.org/10.1016/j.apr.2021.101091>, 2021.
8. **Ardon-Dryer, K.** Warzywoda, J., Tekin, R., Week, B., Biros, J., Almodovar, S., Hope-Weeks, J., and Sacco A. Mask Material Filtration Efficiency and Mask Fitting at the Crossroads: Implications during Pandemic Times, *Aerosol and Air Quality Research*, <https://doi.org/10.4209/aaqr.200571>, 2021.
9. Elmassry, M.M., Ray, N., Sorge, S., Webster, J., Elmassry, M., Kruczek, C., **Ardon-Dryer, K.**, Vanos, J., and San Francisco, M. Investigating the culturable atmospheric fungal and bacterial microbiome in West Texas: Implication of dust storms and origins of the air parcels, *FEMS Microbes*, 1(1) xtaa009, <https://doi.org/10.1093/femsmc/xtaa009>, 2020.
10. **Ardon-Dryer, K.**, Dryer, Y., Williams, J. N., and Moghimi, N.: Measurements of PM_{2.5} with PurpleAir under atmospheric conditions, *Atmos. Meas. Tech.*, 13, 5441-5458, 2020.
11. Malisch, J.L., Harris, B.N., Sherrer, S.M., Lewis, K.A., Shepherd, S. L., McCarthy, P.C., Spott, J.L., Karam, E.P., Moustaid-Moussa, N., Calarco, J. M., Ramalingam, L., Talley, A.E., Canas-Carrel, J.E., **Ardon-Dryer, K.**, Weiser, D.A., Bernal, X.E., & Deitloff, J. Reply to Arora et al.: Concerns and considerations about using the

- CV as an equity tool. *PNAS*. 117 (39) 2020-15932 2020.
<https://doi.org/10.1073/pnas.2015932117>
12. Koerber, A, Starkey, J. C. **Ardon-Dryer, K.** Eko, L Cummins, R. G. Kee, K. F. A Qualitative Content Analysis of Watchlists vs Safelists: How do they address the issue of predatory publishing? *The Journal of Academic Librarianship*, 46 (6) <https://doi.org/10.1016/j.acalib.2020.102236>, 2020.
 13. Malisch, J.L., Harris, B.N., Sherrer, S.M., Lewis, K.A., Shepherd, S. L., McCarthy, P.C., Spott, J.L., Karam, E.P., Moustaid-Moussa, N., Calarco, J. M., Ramalingam, L., Talley, A.E., Canas-Carrel, J.E., **Ardon-Dryer, K.**, Weiser, D.A., Bernal, X.E., & Deitloff, J. In the wake of COVID-19, academia needs new solutions to ensure gender equity. *PNAS*. <https://doi.org/10.1073/pnas.2010636117>, 2020.
 14. Kelley, M.C, Brown, M.M., Fedler, C.B., and **Ardon-Dryer, K.** Long term measurements of PM_{2.5} concentrations in Lubbock, Texas, *Aerosol and Air Quality Research*, <https://doi.org/10.4209/aaqr.2019.09.0469>, 2020.
 15. **Ardon-Dryer, K.** Mock, C., Reyes, J and Lahav, G.: The effect of dust storm particles on single human lung cancer cells, *Environmental Research*, 181, 108891, <https://doi.org/10.1016/j.envres.2019.108891>, 2020.
 16. Vergara-Temprado, J., Murray, B. J., Wilson, T. W., O'Sullivan, D., Browse, J., Pringle, K. J., **Ardon-Dryer, K.**, Bertram, A. K., Burrows, S. M., Ceburnis, D., DeMott, P. J., Mason, R. H., O'Dowd, C. D., Rinaldi, M., and Carslaw, K. S.: Contribution of feldspar and marine organic aerosols to global ice nucleating particle concentrations, *Atmos. Chem. Phys.*, 17, 3637-3658, <https://doi.org/10.5194/acp-17-3637-2017>, 2017.
 17. **Ardon-Dryer, K.** Garimella, S. Huang. Y-W. Christopoulos, C. and Cziczo, D.J.: Evaluation of DMA Size Selection of Dry Dispersed Mineral Dust Particles, *Aerosol. Sci. Tech*, 49:9, 828-841, 2015.
 18. **Ardon-Dryer, K.** Huang. Y-w and Cziczo, D. J.: Laboratory studies of collection efficiency of sub-micrometer aerosol particles by cloud droplets on a single-droplet basis, *Atmos. Chem. Phys*, 15, 9159–9171, 2015.
 19. **Ardon-Dryer, K.** and Levin, Z.: Ground based measurements of immersion freezing in the Eastern Mediterranean, *Atmos. Chem. Phys.*, 14, 5217–5231, 2014.
 20. **Ardon-Dryer, K.** Huang, Y.-w. and Cziczo. D. J.: Collection of submicron particles with cloud droplets using the new MIT-CFC. *AIP Conf. Proc.* 1527, 461; doi: 10.1063/1.4803304, 2013.
 21. Friedman, B. **Ardon-Dryer, K.** Carrasquillo, A. Daumit, K. Boulanger, K. Cross, E. Browne, E. Kroll, J. Thornton, J. and Cziczo, D.: CCN closure and composition analysis of droplet-forming aerosol *AIP Conf. Proc.* 1527,832; doi: 10.1063/1.4803400, 2013.
 22. Bingemer, H.G., Klein, H. Ebert, M. Haunold, W. Bundke, U. Herrmann, T. Kandler, K. Müller-Ebert, D. Weinbruch, S Judt, A. **Ardon-Dryer, K.** Levin, Z. and Curtius, J: Atmospheric ice nuclei in the Eyjafjallajökull volcanic ash plume, *Atmos. Chem. Phys.*, 12, 857–867, 2012.
 23. **Ardon-Dryer, K.** Levin, Z. and Lawson, R. P: Characteristics of Immersion Freezing Nuclei at the South Pole Station in Antarctica, *Atmos. Chem. Phys.*, 11, 4015-4024, 2011.
 24. DeMott, P.J., Möhler, O., Stetzer, O., Vali, G., Levin, Z., Petters, M. D., Murakami, M., Leisner, T., Bundke, U., Klein, H., Kanji, Z. A., Cotton, R., Jones, H., Benz, S., Brinkmann, M., Rzesanke, D., Saathoff, H., Nicolet, M., Saito, A., Nillius, B., Bingemer, H., Abbatt, J.P.D., **Ardon, K.**, Ganor, E., Georgakopoulos, D.G., Saunders, C. Resurgence in Ice Nuclei Measurement Research, *Bull Amer Meteor Soc.*, doi: 10.1175/2011BAMS3119.1, 2011.
 25. **Ardon, K.**, Levin, Z., Ganor, E., Klein, H., Bingemer, H. and Bundke U: Ice Nuclei Concentration under different Meteorological Conditions in Israel, 18th International Conference - Nucleation and Atmospheric Aerosols, 10-14 August 2009, Prague, Czech

- Republic, paper A17.1. Edited by Smolik, J. and O'Dowd, C. ISBN 978-80-02-12161-2, Elsevier, Amsterdam, 2009.
26. DeMott, P.J., Möhler, O., Stetzer, O., Murakami, M., Bundke, U., Klein, H., Kanji, Z. A., Cotton, R., Jones, H., Leisner, T., Cziczo, D., Petters, M.D., Prenni, A.J., Kreidenweis, S.M., Schnaiter, M., Schön, R., Saathoff, H., Wagner, R., Sierau, B., Nicolet, M., Lohmann, U., Gallavardin, S., Saito, A., Nillius, B., Bingemer, H., Abbatt, J., Targino, A., Dorsey, J., **Ardon, K.**, Levin, Z., Ganor, E., Georgakopoulos, D.G., Vali, G. The fourth international ice nucleation workshop (ICIS-2007): Objectives and preliminary results. Proceedings of the 15th International Conference on Clouds and Precipitation, 7-11 July 2009, Cancún, México.
 27. **Ardon, K.**, Levin, Z., Ganor, E., Klein, H. and Bingemer, H: The effect of air pollution on ice nuclei concentration in Israel. Proceedings of the 15th International Conference on Clouds and Precipitation, 7-11 July 2009, Cancún, México.
 28. **Ardon, K.**, Tsoar, H. Blumberg, D.G.: Dynamics of nebkhas superimposed on a parabolic dune and their effect on the dune dynamics, Journal of Arid Environments, 73, 1014-1022, 2009.

Publication submitted / in preparation:

1. **Ardon-Dryer, K.** Gill, T.E., and Tong, D. Reports of dust storms in the storm databases under review, 2022.
2. Huff, D., Carcano, A., Carrell, J., **Ardon-Dryer, K.**, and Cañas-Carrell, J. A Review of Toxicological Effects of Fused Deposition Modeling 3D Printer Emissions, under review, 2022.
3. Sandhu, T., Kelley, M., and **Ardon-Dryer, K.** Classification of Dust Events in Phoenix AZ, (under preparation).
4. Bhakta, S., Kelley, M., and **Ardon-Dryer, K.** Changes of air quality over five sites in West Texas over 21 years, (under preparation).
5. **Ardon-Dryer, K.** Tairu Ayomide, Hassanpreet Dhaliwal, and Moira Plantier, Impact of Various African Dust Particles on Human Health, (under preparation).
6. Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The impacts of Clay Minerals in Epithelial Lung Cells- Analysis at the Single Cell-Level, (under preparation).
7. Plantier, M, Segvic, B, and **Ardon-Dryer, K.** Analysis of mineralogy of dust from Africa, (under preparation).

Grants

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- 2022** Synergetic Surface-based and Satellite-borne Measurements of Arid-region Aerosol and Precipitation (S³-MAAP), in NASA (Co-PI, \$590,000).
 - 2022** Texas Tech University, Faculty Research and Support Funding for Diversity from Office of Institutional Diversity (PI, \$10,000)
 - 2021** Texas Tech University Faculty Travel Grants (Fall 2021 travel \$1,000)
 - 2021** Spark Grants from the Center for Transformative Undergraduate Experiences (TrUE) support undergraduate RA students (\$4,500 for academic years 2021-2022)
 - 2021** Spark Award from the Center for Transformative Undergraduate Experiences (TrUE) to support undergraduate students as RA (\$1,500 for summer 2021)
 - 2020** Texas Tech University Open Access Award for Publications through the Faculty Research Committee (\$1,000)
 - 2019** The CH Foundation Single-cell imaging microscope for different research projects across TTU (PI, \$181,100).
 - 2019** STEM Training in Ethics of Publication Practices (STEPP), in NSF SMA - Cultivating Cultures of Ethica (Co-PI, \$345,702).

2018 International Grant competition for international travel, International office at Texas Tech University (\$2000).

FELLOWSHIPS, AWARDS & HONORS

2021 Texas Tech University President's Excellence in Gender Equity Award
2021 Texas Tech University President's Excellence in Engaged Scholarship Award
2012 Dean's funding for postdoctoral fellowship, Weizmann Institute, Israel.
2011 Israeli Meteorological Society Scholarship for Young Scientists, Israel.
2011 Departmental Excellence Award for Achievements from the Department of Geophysics, Atmospheric and Planetary Sciences, Tel Aviv University, Israel.
2011 NCAR fellowship to attend Weather Research and Forecasting model Workshop (WRF), Cypress.
2008 EUFAR grant fellowship to attend the 2nd EUFAR Summer School on Airborne Cloud and Aerosol Science, KMNI, Utrecht, the Netherlands.
2008 Fellowship from JNF Rieger Foundation Fellowship for Environmental Studies.
2007 Travel grant from MedCLIVAR - Mediterranean Climate Variability and Predictability.
2007 Fellowship from JNF Rieger Foundation Fellowship for Environmental Studies.
2003 Summa Cum Laude graduate from the Department of Geography and Environmental Development, Ben Gurion University, Israel.
2002 Departmental Excellence Award for Achievements from the Department of Geography and Environmental Development, Ben Gurion University, Israel.
2001 Departmental Appreciation Award for Achievements from the Department of Geography and Environmental Development, Ben Gurion University, Israel.

INVITED TALKS

2022

- Why should we care about dust events? Weather Forecast Research Team (WFRT), University of British Columbia, (Virtual), April 28, 2022.
- Dust Events, How They Impact Our Air Quality and Health, Atmospheric Chemistry Colloquium, MIT, (Virtual), April 19, 2022.
- Why should we care about dust events? TTU Climate Science Center, (Virtual), April 19, 2022.
- Dust Events in Texas: When and Why They Occur and How They Impact Our Air Quality and Health, Keynote speaker at the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Why should we care about dust events? Department of Geography seminar, University of Utah, (Virtual), March 4, 2022.
- Field Work During My Academic Path, as part of the 21st Annual Student Conference at the American Meteorological Society, 102th annual meeting, (Virtual), January 24-28, 2022.

2021

- Dust events, a growing concern for air quality and human health, in session Earth System Interactions and Implications for GeoHealth in the American Geophysics Society annual meeting, USA, New Orleans, December 13-17, 2021.
- Has Diversity, Equity, and Inclusion influenced science and research in the cloud physics community? 18th ICCP Conference, (Virtual), August 5, 2021.

- The Effect of Dust Particles on Human Lung Epithelial Cells, Lahav lab Harvard university group meeting, (Virtual), June 21, 2021.
- Aerosol Generation from Flute Playing, TTU Faculty Research Club (Virtual), April 28, 2021.
- Dust storms, their impact on air quality and our health, The 18th Annual Climate Prediction Applications Science Workshop (CPASW), (Virtual), April 20-22, 2021.

2020

- What can dust particles tell us about air quality and human health. An international perspective, Global Roundup, Frontiers in International Research Seminars TTU, (Virtual), October 21, 2020.
- COVID-19 ensuring gender equity in academia. WISPACE Conference: Presenting a Vision and Activity, The Impact of COVID on the Space Industry, Women in the Israeli Space Industry, (Virtual), June 23, 2020.
- New mask design in COVID 19 ERA. Are they going to protect us? GEO Health CoP Telecon meeting (Virtual), June 2, 2020.

2019

- Haboobs and Dust Storms: How do they impact us now and in the future? Citizens' Climate Lobby of Lubbock, Lubbock, November 7, 2019, Texas Tech University
- What's in a dust storm? - A characteristics comparison of dust storms measured by AEROS in West Texas, Invited talk, Regional NWS MIC leadership Meeting, Lubbock, September 17, 2019.
- What's in a dust storm? - A characteristics comparison of dust storms measured by AEROS in West Texas, Invited talk, SOOCon West Meeting, Amarillo, August 21, 2019.
- Dust storm and health Invited talk, Lubbock Gem and mineral society annual show, Lubbock, June 1, 2019.
- Haboobs - because everything bigger in Texas Invited talk, Science by the Glass, The Texas Tech Climate Center Present, May 14, 2019.
- Women in STEM Panel: Women's and Gender Studies at the 35th Annual Women's & Gender Studies Conference, April 26th, Texas Tech University
- The atmosphere and everything that lies within, not an empty space after all, Invited talk, AIRSCAPES - atmosphere as a form in architecture, Lubbock, April 5, 2019.
- You can do it" in I'm First Gen Summit, March 7, 2019 Texas Tech University.

2018

- Dusty atmosphere in Lubbock TX - From the air to the lungs Invited talk, The Earth and Planetary Image Facility in the Department of Geography and Environmental Development, Ben Gurion University, Israel, December 19, 2018.
- The dusty cell - A detailed view of the interaction between individual human lung cells and dust storm particles Invited talk, Clinical Research Center and Research Authority at Soroka University Medical Center, Israel, December 6, 2018.
- The dusty cell - A detailed view of the interaction between individual human lung cells and dust storm particles Invited talk, Porter School of Environmental Studies, Tel Aviv University, Israel, December 3, 2018.
- The dusty cell - A detailed view of the interaction between individual human lung cells and dust storm particles Invited talk, Department of Environmental Sciences at the Weizmann Institute, Israel, December 2, 2018.
- The Impacts of Dust Storm Particles on Human Lung Cells: An Analysis at the Single Cell Level Invited talk, Global Health seminar at the Texas Tech University Health Sciences Center, May 2, 2018.

- The Impacts of Dust Storm Particles on Human Lung Cells: An Analysis at the Single Cell Level Invited talk, The Centro de Ciencias de la Atmósfera at the National Autonomous University of Mexico, Mexico City, March 16, 2018.
- Aerosol, tiny particles with large impact on clouds, precipitation and our health, Invited talk, Departments of Biology, Texas Tech University, February 21, 2018.

2017

- Aerosol, tiny particles with large impact on clouds, precipitation and health, Invited talk, Departments of Geosciences, Texas Tech University, January 31, 2017.

2016

- Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Departments of Geography & Geoscience and Physics & Astronomy, University of Louisville, April 20, 2016.
- Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Department Civil and Environmental Engineering, Technion, April 13, 2016.
- Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Department of Solar Energy and Environmental Physic, The Institutes for Desert Research Ben Gurion University, April 11, 2016.
- Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Department of Geography and Environmental Development, Ben Gurion University, April 5, 2016.
- Laboratory Studies of Collection Efficiency of Sub-micrometer Aerosol Particles by Cloud Droplets on a Single Droplet basis, Invited talk, Department of Geophysics, Atmospheric and Planetary Sciences, Tel-Aviv University, April 4, 2016.

2015

- The Mystery of Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Department of Earth and Atmospheric Sciences, Purdue University, February 2, 2015.

2014

- The Mystery of Ice in Clouds: field and laboratory studies of cloud microphysics, Invited talk, Department of Meteorology and Climate Science, San Jose State University, December 8, 2014.
- Aerosols and Clouds and their effects on the radiation, Invited talk, Department of Meteorology and Climate Science, San Jose State University, December 8, 2014.
- Ground based Measurements of Immersion Freezing in the Eastern Mediterranean, MASS seminar, Department of Earth, Atmospheric and Planetary Sciences, MIT, April 28, 2014.
- Ground based Measurements of Immersion Freezing in the Eastern Mediterranean, Departmental seminar, Department of Chemistry, University of New Hampshire April 3, 2014.
- Ground based Measurements of Immersion Freezing in the Eastern Mediterranean, invited seminar, Institute for Atmospheric and Environmental Sciences, Goethe University, Frankfurt, Germany, January 31, 2014.

2013

- Making Stuff Colder Series - The nature of clouds, Invited talk by Nova science Café, Cambridge, M.A, October 22, 2013.

2012

- Measurements of Ice Nuclei in the Eastern Mediterranean, Atmospheric Chemistry seminar, Department of Earth, Atmospheric and Planetary Sciences, MIT, October 31, 2012.

- Air Pollution, Clouds and Their Relationship, Invited talk by the Neiman Library of Exact Sciences and Engineering, Tel Aviv University, Israel, May 3, 2012.
- Ice Nuclei, their Concentration, and Efficiency in Clean and Polluted Air and their Effects on Clouds and Precipitation, Invited seminar, Department of Environmental Sciences at the Weizmann Institute, Israel, February 26, 2012.

2011

- Measurement of Ice Nuclei in Israel- Ice Nuclei Concentration and Efficiency in Clean and Polluted Air and their Effects on Clouds and on Precipitation, Scientific meeting of Israeli National Water Service, Israel, July 20, 2011.
- Measurement of Ice Nuclei in Israel- Ice Nuclei Concentration and Efficiency in Clean and Polluted Air and their Effects on Clouds and on Precipitation, Alumni Conference, Department of Geophysics, Atmospheric and Planetary Sciences, Tel Aviv University, Israel, June 1, 2011.
- Measurement of Ice Nuclei in Israel- Ice Nuclei Concentration and Efficiency in Clean and Polluted Air and their Effects on Clouds and on Precipitation, Invited seminar in the Department of Geography and Environmental Development, Ben Gurion University, Israel, March 24, 2011.

2010

- Physics of Cloud formation and Precipitation, International weather modification meeting in Galilee International Management institute, Israel, November 1, 2010.

CONFERENCE PRESENTATIONS

Talks

- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** Impact of dust events from Lubbock on Human health: Examining December 2021 dust events, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Kelley, M. and **Ardon-Dryer, K.:** Characteristics of blowing dust events across West Texas, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- **Ardon-Dryer,** The Spatial and Temporal Impact of Dust Storms in Texas. American Meteorological Society, 102th annual meeting, (Virtual), January 24-28, 2022.
- **Ardon-Dryer, K.,** Tairu Ayomide, Hassanpreet Dhaliwal, and Moira Plantier. Impact of Various African Dust Particles on Human Health. American Geophysics Society meeting, USA, New Orleans, December 13-17, 2021.
- **Ardon-Dryer, K,** Dust storm reports across the US Analysis based on the NOAA Storm Events Database. Southern New Mexico / Western U.S. Dust Symposium (Virtual) October 25-27, 2021.
- **Ardon-Dryer, K,** Garner Santa, L, San Fransisco, M and Bailes, E. Aerosol Generation from Flute Playing, 39th AAAR Annual Conference (Virtual) October 18-22, 2021.
- **Ardon-Dryer, K,** Dust Storms, and Health Impacts. Joint Advisory Committee (JAC) for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua / El Paso, Texas / Doña Ana County, New México Air Basin, 81st Ordinary Meeting (Virtual), August 31, 2021.
- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The impacts of Clay Minerals in Epithelial Lung Cells- Analysis at the Single Cell-Level, Joint Advisory Committee (JAC) for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua / El Paso, Texas / Doña Ana County, New México Air Basin, 81st Ordinary Meeting (Virtual), August 31, 2021.
- **Ardon-Dryer, K.,** Robinson, K. Melendez, B., and Kandler K. From Africa to West Texas - Measurements of aerosol particles from the Sahara. Southern NM Dust Symposium, USA (Virtual), April 5, 2021.

- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The Impact of Clay Minerals on Lung Cells– an Analysis at the Single Cell Level. Southern NM Dust Symposium, USA (Virtual), April 5, 2021.
- **Ardon-Dryer, K.** Sandhu, T and Kelley, M.: Classification of Dust Storms in Phoenix AZ and Their Implication on Air Quality, Arizona Dust Storm Workshops, AZ, (Virtual), March 24, 2021.
- **Ardon-Dryer, K.**, Robinson, K. and Melendez, B. From Africa to West Texas - Measurements of aerosol particles from the Sahara. American Meteorological Society, 101th annual meeting, (Virtual), January 10-15, 2021.
- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The Impact of Clay Minerals on Lung Cells– an Analysis at the Single Cell Level. American Meteorological Society, 101th annual meeting, (Virtual), January 10-15, 2021.
- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The impacts of Clay Minerals in Epithelial Lung Cells- Analysis at the Single Cell-Level, American Geophysics Society meeting, USA (Virtual), December 1-17, 2020.
- Kelley, M. and **Ardon-Dryer, K.:** Dust Storm Events in Lubbock, Texas from 2000-2019 and their Potential Impact on Local Residents, 2020 Fall Southern NM Dust Symposium, USA (Virtual), October 26, 2020.
- Kelley, M. and **Ardon-Dryer, K.:** An examination of the patterns of blowing dust days in Lubbock, Texas from 2000-2019, 4th Texas Weather Conference, Lubbock, TX, USA (Virtual), September 24-25, 2020.
- Sandhu, T., Kelley, M. and **Ardon-Dryer, K.:** Analysis of Dust Storms in Maricopa and Pima Counties for 2005-2018, 4th Texas Weather Conference, Lubbock, TX, USA (Virtual), September 24-25, 2020.
- Ramirez-Diaz, Z. and **Ardon-Dryer, K.:** The Impacts of Mineral Dust (Montmorillonite) Particles on Lung Cells – an Analysis at the Single Cell Level, 4th Texas Weather Conference, Lubbock, TX, USA (Virtual), September 24-25, 2020.
- Zhang, X., Gilbert, B., Jeff D. and **Ardon-Dryer, K.:** The Impact of Dust Storm Events on ER Visits in West Texas, 4th Texas Weather Conference, Lubbock, TX, USA (Virtual), September 24-25, 2020.
- **Ardon-Dryer, K.**, Kelley, M. Plantier, M. and Xia, X.: A Characteristics Comparison of Dust Storms Measured by AEROS in West Texas, 4th Texas Weather Conference, Lubbock, TX, USA (Virtual), September 24-25, 2020.
- **Ardon-Dryer, K.:** Differences between Dust Storms Measured by AEROS, 2020 Southern NM Dust Conference, Las Cruces, NM, USA (Virtual), April 6, 2020.
- **Ardon-Dryer, K.:** Effect of Dust Particles on Human Lung Cells, 2020 Southern NM Dust Conference, Las Cruces, NM, USA (Virtual), April 6, 2020.
- **Ardon-Dryer, K.**, Tairu, A., Ramirez-Diaz, Z., Xia, X and Zhang, X. The Effect of Dust Storm Particles on Human Lung Epithelial Cells. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.
- **Ardon-Dryer, K.**, Kelley, M., Xia, X and Plantier, M. What's in a Dust Storm? A Characteristics Comparison of Dust Storms Measured by AEROS in West Texas. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.
- **Ardon-Dryer, K.** Maman, S., Friedlander, L., Schüttler., T and Hakamada, R. She Space International – an Educational Project to Advance and Empower Female Students in STEM Focusing on Space Science. American Geophysics Society meeting, San Francisco, CA, USA, December 9-13, 2019.

- **Ardon-Dryer, K.**, Brown, M., Kelley, M., Berdine, G., Dennis J. and Yang S.: The effect of dust storms on the rate of ER admissions in West Texas, American Meteorological Society, 99th annual meeting, Phoenix, AZ, USA, January 6-10, 2019.
- **Ardon-Dryer, K.**, Mock, C., Reyes, J. and Lahav G.: The Impacts of Dust Storm Particles on Human Lung - an Analysis at the Single Cell Level, 10th International Aerosol Conference (IAC 2018) St. Louis, Missouri, USA, September 2-7, 2018.
- **Ardon-Dryer, K.**, Mock, C., Reyes, J. and Lahav G.: The Impacts of Dust Storm Particles on Human Lung - an Analysis at the Single Cell Level, American Meteorological Society, 98th annual meeting, Austin, TX, USA, January 7-11, 2018.
- **Ardon-Dryer, K.**, Mock, C., Reyes, J. and Lahav G.: The Impacts of Dust Storm Particles on Human Lung - an Analysis at the Single Cell Level, American Geophysics Society meeting, New Orleans, LA, USA, December 11-15, 2017.
- **Ardon-Dryer, K.**, Huang, Y.-w. and Cziczo, D.J.: Using Mass Spectrometry to Determine Residual Chemical Composition in Coagulation Experiments, American Chemical Society meeting, Boston, Massachusetts, USA, August 16-20, 2015.
- **Ardon-Dryer, K.**, Huang, Y.-w. and Cziczo, D.J.: Experimental Assessment of Collection Efficiency of Submicron Aerosol Particles by Cloud Droplets Using the New MIT-CFC, American Meteorological Society meeting, 14th conference on cloud physics, Boston, Massachusetts, USA, July 7-11, 2014.
- **Ardon-Dryer, K.**, Levin, Z. and Teller A.: Measurements of Ice Nuclei in the Eastern Mediterranean, The International Conference on Clouds and Precipitation (ICCP), Leipzig, Germany, July 31- August 3, 2012.
- **Ardon-Dryer, K.**, Levin, Z., Bingemer H. and Klein, H. Atmospheric ice nuclei (IN) in the Eyjafjallajökull volcanic ash plume over Germany and Israel. Annual Meeting of the Israeli Association of Aerosol Research, Rehovot, Israel, March 1, 2012.
- **Ardon-Dryer, K.**, Levin, Z., Bingemer H. and Klein, H. Atmospheric ice nuclei (IN) in the Eyjafjallajökull volcanic ash plume over Germany and Israel. European Aerosol Conference, Manchester, England, September 4-9, 2011.
- **Ardon, K.**, and Levin, Z: Measurement of Immersion Freezing Nuclei in Antarctica, the Israeli Association for Aerosol Research, 2010, the Hebrew University, Jerusalem, Israel, February 10, 2010.
- **Ardon, K.**, Levin, Z., Ganor, E., Klein, H., Bingemer, H. and Bundke U: Ice Nuclei Concentration under different Meteorological Conditions in Israel, The 18th International Conference on Nucleation & Atmospheric Aerosols, 2009, Prague, Czech Republic, August 10-14, 2009.
- **Ardon, K.**, and Levin, Z: Measurement of ice nuclei in Israel using the device - FRIDGE-TAU. CARESS 2009, Weizmann Institute of Science, Rehovot, Israel, June 8, 2009.
- **Ardon, K.**, Levin, Z., Ganor, E., Measurements of ice nucleation on aerosol particles in Israel using the new instrument FRIDGE-TAU, the Israeli Association for Aerosol Research, 2008, Tel Aviv University, Tel Aviv, Israel, December 24, 2009 (In Hebrew).
- **Ardon, K.** and Levin, Z: The influence of air pollution on the development of ice in clouds and on precipitation formation, The 2nd EUFAR Summer School on Airborne Cloud and Aerosol Science, 2008, The Netherlands Meteorological Institute, Utrecht, The Netherlands, April 17-25, 2008.
- **Ardon, K.**, Tsoar, H., and Blumberg, D.G. Dynamics of the Ashdod Nizzanim Nebkha dunes. The Geography society convention, Jerusalem University, Israel, January 01-03, 2006 (In Hebrew).
- **Ardon, K.**, Tsoar, H., and Blumberg, D.G. Dynamics of the Ashdod Nizzanim Nebkha dunes. CARESS 2005, Weizmann Institute of Science, Rehovot, Israel, May 29, 2005.

Poster presentations

- Duncan, L. Moghimi, N., and **Ardon-Dryer, K.**: A Comparison of different Correction Methods for the Low cost Particulate Matter Sensor PurpleAir PA-II during the November 2018 Wildfire Outbreak in California, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Sandhu, T., Kelley, M. and **Ardon-Dryer, K.**: Analysis of Dust Events in Maricopa County for 2005-2018, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Barrera-Castillo, M., Ramirez-Diaz, Z. and **Ardon-Dryer, K.**: The Impact of Israeli Dust Storm on Human Health, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Kelley, M. Van Pelt, S. Betha, R. Fedler, C.B. and **Ardon-Dryer, K.**: Precipitation Events Trigger Blowing Dust Events at Texas Southern High Plains, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Dhaliwal, H.K. Reynolds, R. Goldstein, H. Kanji, Z.A. Gao, K. and **Ardon-Dryer, K.**: Effect of soot and coal fly ash particles on human lung cells, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Bhakta, S. Kelley, M.C. and **Ardon-Dryer, K.**: PM_{2.5} Measurements in The Semi-Arid Region of West Texas, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Zhang, X. Duncan, L. and **Ardon-Dryer, K.**: Changes of Particulate Matter as measured by the Harvard Impactor as Part of AEROS, the 5th Texas Weather Conference, Lubbock, TX, USA, April 1-2, 2022.
- Kelley, M. and **Ardon-Dryer, K.** Analysis of dust storm days in Lubbock, Texas from 2000-2019. American Meteorological Society, 101th annual meeting, (Virtual), January 10-15, 2021.
- Tairu, A. and **Ardon-Dryer, K.** Impacts of African Dust Storm Particles on Human Lung Epithelial Cells. American Meteorological Society, 101th annual meeting, (Virtual), January 10-15, 2021.
- Plantier, M. Šegvić, B. Kandler, K. and Ardon-Dryer, K. Characteristics of Sahara Desert Soil Particles. American Meteorological Society, 101th annual meeting, (Virtual), January 10-15, 2021.
- Ramirez-Diaz, Z. and **Ardon-Dryer, K.** The Impact of Clay Minerals on Lung Cells - an Analysis at the Single Cell Level. American Geophysics Society meeting, (Virtual), December, 2020.
- **Ardon-Dryer, K.**, Tairu, A., Ramirez-Diaz, Z., Xia, X. and Zhang, X.: The Effect of Dust Storm Particles on Human Lung Epithelial Cells, American Association for Aerosol Research, AAAR 38th Annual Conference, USA (Virtual), October 5-9, 2020.
- **Ardon-Dryer, K.**, Kelley, M., Plantier, M. and Xia, X.: Comparison of Particle Concentration and Distribution during Different Dust Storm Types as Measured by AEROS in West Texas, American Association for Aerosol Research, AAAR 38th Annual Conference, USA (Virtual), October 5-9, 2020.
- Moghimi, N., Edwards, J., Dryer, Y., and **Ardon-Dryer, K.** The November 2018 California Biomass Burning as Measured by Purple Air Sensors. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.
- Kelley, M., Brown, M. and **Ardon-Dryer, K.** Changes in PM_{2.5} Concentrations in Lubbock, Texas. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.

- Williams, J., Mansell, T., Bruning, E. and **Ardon-Dryer, K.** Effects of Ice Nuclei Particle Parameterization on Cloud Formation and Electrification Using the COMMAS Model. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.
- Rademacher, H., Delene, D., **Ardon-Dryer, K** and San Francisco, M. Biological Particles (Bacteria and Fungi) in Thunderstorms. American Meteorological Society, 100th annual meeting, Boston, MA, USA, January 13-16, 2020.
- Xia, X. and **Ardon-Dryer, K.** Effect of Grinding on Dust Particle Size Distribution, American Geophysics Society meeting, San Francisco, CA, USA, December 9-13, 2019.
- **Ardon-Dryer, K.**, Kelley, M., Xia, X and Plantier, M. What's in a Dust Storm? A Characteristics Comparison of Dust Storms Measured by AEROS in West Texas and What it Means to Our Health. American Geophysics Society meeting, San Francisco, CA, USA, December 9-13, 2019.
- Carcano, A., **Ardon-Dryer, K.**, Cañas-Carre, J., et al. Assessment of Exposure and Toxicity of aerosol particle emission from commercial 3D printers. The 2019 Annual South Central SETAC Meeting, May 3-5, 2019 Baylor University, Texas.
- Moghimi, N., Williams J. Dryer Y. and **Ardon-Dryer, K.:** Evaluation of PurpleAir Low-Cost Sensors under Atmospheric Conditions, American Meteorological Society, 99th annual meeting, Phoenix, AZ, USA, January 6-10, 2019.
- **Ardon-Dryer, K.**, Reyes, J., Mock, C. and Lahav G.: The Impacts of Dust Storm Particles on Human Lung Cells - an Analysis at the Single Cell Level, Inaugural Planetary Health/GeoHealth Annual Meeting, Boston, MA, April 28-30, 2017.
- **Ardon-Dryer, K.**, Levin, Z., Bingemer H. Curtius, J. Weinbruch, S. Ebert, M. and Cziczo, D.J.: Atmospheric ice nuclei in the Eyjafjallajökull volcanic ash plume over Germany and Israel, Gordon Research Conferences, Atmospheric Chemistry, Mount Snow Resort, Vermont, USA, July 28 - August 2, 2013.
- **Ardon-Dryer, K.**, Huang, Y.-w. and Cziczo, D.J.: Collection of submicron particles with cloud droplets using the new MIT-CFC, 19th International Conference on Nucleation & Atmospheric Aerosols, Colorado State University, Fort Collins, Colorado, USA, June 24-28, 2013.
- **Ardon-Dryer, K.** and Levin, Z., Measurement of Ice Nuclei in the Eastern Mediterranean and Antarctica. Biogeochemistry and -physics of the lower atmosphere autumn school, Paphos, Cyprus, October 9 -17, 2010
- **Ardon, K.**, Levin, Z., Ganor, E., Klein, H. and Bingemer, H: The effect of air pollution on ice nuclei concentration in Israel, The International Conference on Clouds and Precipitation (ICCP), 2008, July 7-11, Cancun, Mexico, 2008.
- **Ardon, K.**, Tsoar, H., and Blumberg, D.G. Dynamics of the Ashdod-Nizzanim Coastal dunes from ERS imagery, aerial photographs, and ground measurements. MERIS (A)ATSR Workshop 2005, ESARIN center, Frascati, Rome Italy, September 25-30, 2005.

Undergraduate Student conferences Posters and Talks

- Duncan, L. Moghimi, N., and **Ardon-Dryer, K.:** A Comparison of different Correction Methods for the Low cost Particulate Matter Sensor PurpleAir PA-II during the November 2018 Wildfire Outbreak in California, Undergraduate Research Conferences, Texas Tech University, March 29-31, 2022.
- Sandhu, T., Kelley, M. and **Ardon-Dryer, K.:** Analysis of Dust Events in Maricopa County for 2005-2018, Undergraduate Research Conferences, Texas Tech University, March 29-31, 2022.

- Barrera-Castillo, M., Ramirez-Diaz, Z. and **Ardon-Dryer, K.:** The Impact of Israeli Dust Storm on Human Health, Undergraduate Research Conferences, Texas Tech University, March 29-31, 2022.
- Zhang, X. Duncan, L. and **Ardon-Dryer, K.:** Changes of Particulate Matter as measured by the Harvard Impactor as Part of AEROS, Undergraduate Research Conferences, Texas Tech University, March 29-31, 2022.
- Duncan, L. and Ardon-Dryer, K.: Testing the Accuracy of the Purple Air PA-II Sensor, Undergraduate Research Conferences, Texas Tech University (Virtual), March 29-31, 2021.
- Sandhu, T. and **Ardon-Dryer, K.:** Analysis of Dust Storms in Maricopa County for 2005-2018, Undergraduate Research Conference, Texas Tech University (Virtual), March 29-31, 2021.
- Robinson, K. and **Ardon-Dryer, K.:** From Africa to West Texas: Measurements and impacts of aerosol particles from the Sahara, Undergraduate Research Conferences, Texas Tech University (Virtual), March 29-31, 2021.
- Zhang, X. and **Ardon-Dryer, K.:** Changes of Particulate Matter as measured by the Harvard Impactor as Part of AEROS, Undergraduate Research Conferences, Texas Tech University (Virtual), March 29-31, 2021.
- Plantier, M. and **Ardon-Dryer, K.:** The comparison and characteristics of aerosol particles on clear and dusty days in Lubbock, Texas, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Horton, M. and **Ardon-Dryer, K.:** Changes of meteorological parameters during dust storms, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Luna, D. and **Ardon-Dryer, K.:** The effects of an israeli dust storm on human cells, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Xia, X. and **Ardon-Dryer, K.:** Does grinding change dust particles' size distribution?, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Tairu, A. and **Ardon-Dryer, K.:** The Effect of Dust Storm Particles on Human Lung Epithelial Cell Colonies Behavior, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Patel, R., San Francisco, M. and **Ardon-Dryer, K.:** Microbial diversity in dust samples from around the United States, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Abdullah, S. and **Ardon-Dryer, K.:** Effects of dust particles kaolinite on human lung cells, Department of Geosciences Research Day, Texas Tech University, May 8, 2019.
- Luna, D. and **Ardon-Dryer, K.:** The effects of an israeli dust storm on human cells, Undergraduate Research Conferences, Texas Tech University, April 1-3, 2019.
- Xia, X. and **Ardon-Dryer, K.:** Does grinding change dust particles' size distribution?, Undergraduate Research Conferences, Texas Tech University, April 1-3, 2019.
- Tairu, A. and **Ardon-Dryer, K.:** The Effect of Dust Storm Particles on Human Lung Epithelial Cell Colonies Behavior, Undergraduate Research Conferences, Texas Tech University, April 1-3, 2019.
- Patel, R., San Francisco, M. and **Ardon-Dryer, K.:** Microbial diversity in dust samples from around the United States, Undergraduate Research Conferences, Texas Tech University, April 1-3, 2019.
- Abdullah, S. and **Ardon-Dryer, K.:** Effects of dust particles kaolinite on human lung cells, Undergraduate Research Conferences, Texas Tech University, April 1-3, 2019.

MENTORING & ADVISING STUDENTS

Ph.D. Students, Current

Mary (Cece) Kelley, (Fall 2020 - Present): Spatial and temporal changes of dust events in West Texas
Zyanya Ramirez (Fall 2021 – Present): Impact of dust events in Lubbock Texas on Human Lung Cells

Master's Students, Current

Hassanpreet (Hassan) Dhaliwal (Spring 2021 - Present): Effect of Soot on Human Lung Cells.
Stephanie Voelker (Fall 2021 - Present): Measurements of Dust events using AEROS
Aziz, Mohammad Tarak (Summer 2022 - Present): Impact of dust event in Phoenix Arizona on air quality, short term analysis of Particulate matter
Sristy Ummat Safwat (Summer 2022 - Present): Air quality in El Paso Texas
Rawlins Emily (Fall 2022- Present): Changes of air quality in Phoenix Arizona over 20 years, the impact of dust event

Master's Students, Graduated

- Zyanya Ramirez (Fall 2019 – Spring 2021): The Impacts of Dust Storm on Human Lung Cells an Analysis at the Single Cell Level
- Moira Plantier (Fall 2019 - Spring 2021): Mineralogical and Chemical Composition of Dust Particles from Africa (co-chair)
- Ayomide Tairu (Fall 2019 - Spring 2021): Effect of dust particles from Africa on cell viability (co-chair)
- Mary (Cece) Kelley, (Fall 2018 – Spring 2020): Changes in PM_{2.5} concentration in Lubbock, Texas
- Jake Williams, (Fall 2018 - Summer 2020): Effects of Ice Nuclei Particle Parameterization in the N-COMMAS Model

Undergraduate Students, Current

1. Maria Barrera-Castillo (Fall 2021- present): Effect of dust storm on human health
2. Abigail Kirkpatrick (Spring 2022- present): Measurements on PM in Lubbock TX.
3. Samuel Patton (Spring 2022 -present): ASOS units across the US
4. Riley Jakino (Spring 2022 -present): ASOS units across the US
5. Joshua Bielss (Spring 2022 -present): ASOS units across the US
6. Hannah Fornash (Spring 2022 -present): ASOS units across the US
7. Bindika Patel (Summer 2022 -present): ASOS units across the US
8. Powell, Hannah (Summer 2022 -present): ASOS units across the US

Undergraduate Students, Graduated/ Former

** Graduated who became Master's Students in my group*

1. Theodore Sandhu (Fall 2019- summer 2022): Changes in dust events in Arizona
2. Xueting (Tina) Zhang (Fall 2019- Summer 2022): Measurements on PM in Lubbock TX.
3. Liam Duncan (Spring 2021 - Summer 2022): Analysis of PurpleAir sensor
4. Sneha KC (Spring 2022): ASOS units across the US
5. Samuel Stehno (Spring 2022): ASOS units across the US
6. Shiv Bhakta (Summer 2020- Fall 2021): Air quality across West Texas
7. Beatriz Melendez (Fall 2020 – Fall 2021): Analysis of AEROS-HOME.
8. Kristina Robinson (Fall 2020 - Spring 2021): Air quality in Texas due to June 2020 Sahara dust
9. Radha Patel (Fall 2018 - Spring 2020): presence of microbiome in dust particles
10. Suha Abdullah (spring 2018 - Spring 2020): Effect of clay mineral on cells at a single cell level
11. Xueting (Amanda) Xia (Summer 2018 - Spring 2020): Analysis of AEROS aerosol concentration.
12. Brittany Graham (Fall 2019 - Spring 2020): Measuring of PM_{2.5} and PM₁₀ using AEROS
13. Casey Collins (Fall 2019 - Spring 2020): Measuring of PM_{2.5} and PM₁₀ using AEROS
14. Kai Summerall (Fall 2019 - Spring 2020): Changes in PM_{2.5} concentration in Amarillo
15. Faith Hurd (Fall 2019- Spring 2020): Effect of dust particles on cell colonies growth
16. William Kastor (Fall 2019- Spring 2020): Effect of dust particles on cell colonies growth

17. Derek Luna (Fall 2018 - Fall 2019): Effect of dust storm from Israel on cells at a single cell level
18. Justin Edwards (Summer 2019): Purple air sensors in Lubbock
19. *Tairu Ayomide (Fall 2018 - Spring 2019): Effect of dust particles on cell colonies growth
20. *Plantier Moira (Spring 2019): Dust storm in Arizona.
21. Dylan Angel (Spring 2019 - Fall 2019): Effect of dust particles on cell colonies growth
22. Mallory Brown (Spring 2018 -Spring 2019): Measurements of PM in West Texas atmosphere
23. Markicia Horton (Spring 2019): Measurements of aerosol particle in West Texas atmosphere
24. Darbie Cooper (Spring 2019): Effect of dust particles on cell colonies growth
25. Ellen Ojeda (Spring 2019): Measurements of aerosol particle in West Texas atmosphere
26. Nimotallah Abdurrazaq (Fall 2018): Effect of dust particles on cell colonies growth
27. Joshua Ademiluyi (Spring 2018): Effect of clay mineral on cells at a single cell level

High school Students, Current and past

Nastaran Moghimi (spring 2018 – Present, Curenly an Undergraduate Students at Yale.): Evaluation of PurpleAir sensor.

Maya Hunter (summer 2020- Fall 2020): Evaluation of Colorado PurpleAir sensor

Ph.D. Committee Member, Current

Morgan Williamson, Department of Biological Sciences, Texas Tech University (Fall 2019- present).

Nick Wolpert, Department of Biological Sciences, Texas Tech University (Spring 2022- present).

Ruba Aizubi, Department of Geosciences, Texas Tech University (Spring 2022- present).

Sonia Munoz, Department of Environmental Toxicology, Texas Tech University (Fall 2021- present).

Roham Hossein, Department of Public Health, TTUHSC (Fall 2021- present).

Prudence Venner, Department of Geosciences, Texas Tech University (Fall 2022- present).

MS. Committee Member, Current

Committee Member, Graduated

- Mark Johnson, PhD. (2022): Department of Natural Resources Management, TTU, Airborne environmental DNA metabarcoding and ecology for terrestrial species detection,
- Analicia Carcano MSc. (2021): Department of Environmental Toxicology, TTU, Effects of 3D printing nano-aerosol emissions and microplastics on A549 Epithelial Lung Cells.
- Walley, Samantha, MSc. (2021): Department of Geosciences, Atmospheric Science Group, TTU, Exploring XCO₂ Spatial Variability Across Frontal Boundaries Using Airborne Lidar Observations and Numerical Simulations.
- Tarek Kandakji, PhD. (2020): Department of Geosciences, TTU, Identifying and Spatio-temporal Analysis of Dust Point Sources in Southwestern United States and applying Robotics in Wind Erosion Studies.
- Murphy Kelley, MSc. (2018): Department of Geosciences, Atmospheric Science Group, TTU, Assessing Lightning Risk in Vulnerable Outdoor Environments.

Ph.D. Dean representative

Summer 2022 - Jiwasmika Baishy, Biology, TTU

Summer 2021 - Caroline Schuster, Biology, TTU

Fall 2020 – Sergio Castro Gonzalez, Biology, TTU

Fall 2020 - Adesewa A. Odetayo, Civil and Environmental engening, TTU

ADDITIONAL TRAINING

School of Ice workshop – Denver, Colorado

June 2019

U.S. Ice Drilling and National Science Foundation workshop for training faculty from Minority Serving Institutions to implement ice core and climate change related science at the introductory college level.

Harvard Medical School - Teaching Institute workshop – Boston, MA **July 2016**
Teaching Institute: Theory, Practice, & Navigating STEM Higher Education. A four days' workshop held by Dr. Jennifer Herman, Director of the Center for Excellence in Teaching from Simmons College.

The Netherlands Meteorological Institute - Utrecht, The Netherlands **April 2008**
The 2nd European Facility for Airborne Research (EUFAR) Summer School On Airborne Cloud and Aerosol Science.

PROFESSIONAL SERVICE, LEADERSHIP AND MEMBERSHIPS

Professional service & leadership service at TTU

Fall 2017- Present Member of TTU Climate Science Center
Spring 2017-Present Member of TTU First Generation Transition & Mentoring Programs
• Presenter in 2018 “I’m First Gen” Summit - Mentoring
• Presenter in 2019 “I’m First Gen” Summit - You can do it
Spring 2017-Present Member of STEM Core center of outreach research and education
• Tech Savvy, STEM Conference for 6th to 9th-grade girls
Spring 2022 She Space International workshop, representing USA team
Fall 2021 Department of Geosciences search committee member.
Spring 2021 Speaker in the TTU Society for Advancement of Chicanos/Hispanics and Native Americans In Science (SACNAS) February event.
Spring 2021 She Space International workshop, representing USA team
Summer 2019 Organizer of She Space International workshop at TTU
Spring 2018 Department of Geosciences search committee member.
Spring 2019 Department of Geosciences search committee member.

Professional service & leadership service

2022- Present Dust Alliance for North America (DANA) Executive Committee & Co-Founder.
2021-Present ESWN Associate Board of Directors, co-chair of member events.
2020-Present Board Member in the Board of Representation, Accessibility, Inclusion, and Diversity (BRAID) in the American Meteorology Society.
Member of AMS Women Committee under BRAID.
2018-Present Board Member of Environment and Health in the American Meteorology Society.
2022 Chair the joint Presidential Sessions and 13th Conference on Environment and Health on *Health Security: Air Quality in Texas Cities*, at American Meteorological Society meeting, (Virtual), January 24-28, 2022.
2021 Co-chair for the session *Dust in a Changing Climate: From Small-Scale Insights to Large-Scale Understanding*, at American Geophysics Society annual meeting, USA, New Orleans, December 13-17, 2021.
2021 Panelist in the session Diversity and women in cloud physics as part of the 18th ICCP Conference, August 5, 2021.
2021 Co-chair of the session *Aerosols and Health- Short- and Long-Term Health Impacts of Exposure* in the 12th Conference on Environment and Health at the 101th AMS meeting, virtual, January 2021.
2021 Speaker in the Israeli Women in STEM & Their Contribution to Global Innovation at Cleveland Hillel event, April 11, 2021.
2020 Chair of the session *Health Effects: Global Air Quality And Health* in American Association for Aerosol Research, AAAR 38th Annual Conference, USA (Virtual), October 5-9, 2020.

- 2020** Speaker in the MIT 2020 “Path of Professorship Workshop”, (<http://odg.mit.edu/development/pop/>).
- 2020** Co-chair of the session *Air Pollution Health Impacts Assessments* in the 11th Conference on Environment and Health at the 100th AMS meeting, Boston, MA, USA, January 2020.
- 2020** Volunteer in the Board of Women and Minority (BWM) in the American Meteorology Society - Organizing team for AMS Annual Women Luncheon.
- 2019** Co-chair of the session *Aerosols, Aeroallergens, and Health* in the 10th Conference on Environment and Health at the 99th AMS meeting, Phoenix, AZ, USA, January 2019.
- 2018** Co-chair of the session *Assessments of Air Pollution Exposure Variability and Health* in the 9th Conference on Environment and Health in the 98th AMS meeting, Austin, TX, USA, January 2018.
- 2016** Organizer of Harvard’s first Path of Professorship Workshop for postdoctoral women.
- 2015** Reviewer for the 2015 National Fellowships Program of Sigma Delta Epsilon/ Graduate Women in Science.
- 2014** Organizer of Postdoctoral meeting at MIT in the Department of Earth, Atmospheric and Planetary Sciences.
- 2014** Organizer of the “Summer Workshop on Data Analysis and Presentation of Cloud Microphysical Measurements”, held at MIT.
- 2013-2014** Organizer of “Path of Professorship Workshop”, held at MIT, (<http://odg.mit.edu/development/pop/>).
- 2013** Organizer of NEATChem-2013, The 4th New England Atmospheric Chemistry Symposium (<https://sites.google.com/site/neatchem/>), held at MIT.
- 2013** Session chair at the 19th International Conference on Nucleation & Atmospheric Aerosols and Nucleation Symposium, Fort Collins, Colorado, USA, 24-28 June 2013.
- 2012** Session chair at the 25th Annual Meeting of the Israeli Association of Aerosol Research, Rehovot, Israel, March 1, 2012.
- 2002-2004** Project Coordinator and manager at the Karen Moses - Leadership Program at Ben Gurion University, Israel. Managements of three projects and twenty students.

Reviewer of different Grants:

- 2022** Reviewer for National Science Foundation.
- 2022** Reviewer for the Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory.
- 2021** Reviewer for the European Research Council (ERC).
- 2015** Reviewer for the 2015 NOAA's Atmospheric Chemistry, Carbon Cycle, and Climate (AC4) proposal program.

Reviewer of scientific publications:

Aerosol and Air Quality Research
Atmosphere
Atmospheric Chemistry and Physics
Atmospheric Measurement Techniques
Atmospheric Pollution Research
Atmospheric Pollution Research
Bulletin of the American Meteorological Society (BAMS)
Environment International

Environmental Health Insights
Environmental Research
Environmental Science & Technology
Environmental Science Processes & Impacts
GeoHealth
Geophysical Research Letters
International Journal of Environmental Research and Public Health
International Journal of Heat and Mass Transfer
Journal of Geophysical Research

Professional Society Membership(s) present and past:

American Geophysical Union
American Meteorological Society
American Association for Aerosol Research
European Geophysical Union
American Chemical Society
International Commission of Clouds and Precipitation
International Journal of Environmental Research and Public Health
International Journal of Heat and Mass Transfer
Nucleation & Atmospheric Aerosols Society
European Aerosol Society
Earth Science Women's Network
Israeli Meteorological Society
Israeli Association of Aerosol Research

LANGUAGES

Hebrew - native
English – fluent

Google Scholar page - <http://scholar.google.com/citations?user=7pQppTYAAAAJ&hl=en>
Research Gate page - https://www.researchgate.net/profile/Karin_Ardon-Dryer