

CURRICULUM VITAE and LIST OF PUBLICATIONS**Personal details**

Name: Nurit Agam
 Work address: Jacob Blaustein Institutes for Desert Research (BIDR)
 Ben-Gurion University of the Negev (BGU)
 Sede Boqer Campus, 8499000, Israel
 agam@bgu.ac.il
 972-8-6563471 (office), 972-52-2292131 (mobile)
 Lab website: <http://www.micrometlab.com>
 Researcher ID [E-1836-2013](#)
 ORCID ID [0000-0002-8921-6179](#)
 Google Scholar [Nurit Agam - Google Scholar](#)
 CRIS profile [Nurit Agam — Ben-Gurion University Research Portal \(bgu.ac.il\)](#)

Education

BA *Cum Laude* 1995 BGU, BIDR & Dept. Geography and Environmental Development
 MA *Cum Laude* 1999 BGU, BIDR & Dept. Geography and Environmental Development
Advisors: Profs. Pedro Berliner, Jonathan Laronne and Avraham Zangvil
Title of thesis: The contribution of dew to the water balance of bare soil in a desert area
 PhD *Combined M.A.-PhD.* 2006 BGU, BIDR & Dept. Geography and Environmental Development
Advisors: Profs. Pedro Berliner, Jonathan Laronne and Avraham Zangvil
Title of thesis: The contribution of dew to the water and heat balance of bare soil in a desert area

Employment history

2021-present Professor, French Associates Institute for Agriculture and Biotechnology of Drylands (FAAB), BIDR, BGU (rank received January 2022).
 2018-2019 Visiting Scientist, US Dept. Agriculture, Agricultural Research Services, Hydrology and Remote Sensing Lab. On sabbatical leave.
 2017-2021 Associate Professor, French Associates Institute for Agriculture and Biotechnology of Drylands (FAAB), BIDR, BGU (rank received July 2017, tenured since November 2018).
 2013-2017 Senior Lecturer, FAAB, BIDR, BGU
 2008-2012 Research associate, Agricultural Research Organization (ARO) – Gilat Research Center, Soil, Water and Environmental Sciences Institute, hosted by Dr. Ben-Gal
 2006-2007 Post-doctoral fellow, Hydrology and Remote Sensing Laboratory, Agriculture Research Service, US Department of Agriculture, Beltsville, MD, USA, hosted by Dr. Kustas.
 2004-2005 Post-doctoral position, Department of Environmental Sciences & Energy Research, Weizmann Institute of Science, hosted by Prof. Yakir

Synopsis of research

My research themes revolve around the exchange of heat and water across the soil-plant-atmosphere continuum in the Earth's *Critical Zone* (from the upper soil layer to the lower atmosphere). These interrelated exchange processes regulate the natural environment and determine the abundance of life-sustaining resources. I explore both natural and agricultural ecosystems, which compound a holistic, complementary view. My toolbox comprises field experiments utilizing state-of-the-art micro-meteorological instrumentation, to which I apply modeling approaches.

In natural environments, my research epicenter is dryland ecosystems, where water is scarce, and conditions are extreme. In these areas, non-rainfall water inputs (NRWIs; i.e., dew, fog, and direct water vapor

adsorption) play a crucial role in the ecosystem's functioning. Based on my expertise in this topic [publications [#1](#), [#2](#), [#3](#), [#5](#) (cited >250 times), [#8](#), [#30](#), [#31](#)], I was granted funding by the highly competitive Israel Science Foundation (ISF) grant program [[ISF grant 481/16](#), 2016]. With this support, I developed a multi-scale approach to quantifying NRWIs over bare loess soil in the Negev Desert ([#42](#)). As part of this multi-scale approach, I lately expanded my NRWIs research to the Namib Sand Sea. During a two-week research-based course, the students (Israeli, Namibian, South-African, and American) collected data which supported my hypothesis that direct water vapor adsorption plays a significant role in the water balance in this foggy hyper-arid desert. Evidently, even more so than fog [#57](#). Based on this enigmatic finding, I developed a research plan to model atmospheric-water capture by the world's desert soils, which was lately approved for funding by the ISF [[ISF grant 2381/21](#), 2021]. This line of research, along which I have developed my scientific career ever since my PhD, combines my fascination with deserts, my adventurous nature, and my temptation to push frontiers (scientific, instrumental, and, yes, personal too). This is, without a doubt, the topic I am most passionate about.

My international recognition in this field has been acknowledged by an invitation I received to collaborate with several worldwide leading environmental scientists (from Switzerland, Germany, the Netherlands, and the USA) on a paper published in *Nature Communications* [#54](#) highlighting the need to include soil structure in Earth System Models. Since its publication in 2020, this paper was cited 57 times (as of August 2022), ranking it among the top 1% highly cited papers in the academic field Geosciences and its publication year (as defined by ISI). I was also elected Vice President of the International Fog and Dew Association (2016–2019) and am serving on its Scientific Board since. As part of the Board duties, I have served on the scientific committees of the 7th (2016), 8th (2019), and 9th (2023) International Conference on Fog, Fog Collection, and Dew; and as a co-Guest Editor of the forthcoming [Special Issue](#) "Advances in fog and dew life cycle and dynamics in the hydrological cycle" in *Journal of Hydrology* (Q1).

In agricultural systems, my research encompasses aspects of the microclimatic effects on crop yield and quality, from individual wine-grape clusters to entire fields and beyond. Aiming to understand the environmental conditions affecting grape quality and define the optimal cluster-zone microclimate, I established a multidisciplinary, collaborative, research with Prof. Aaron Fait (BIDR/BGU), a fruit metabolism specialist. This research revealed how sunlight modulates the fruit's metabolic profile and shapes the temporal and spatial patterns of compound accumulation within the grape cluster [#41](#), [#44](#), and [#46](#). These findings convinced several of the Negev Highlands viticulturists that they could improve grape quality by providing the grapes with a particular degree of shading. Some have actually implemented changes of their vineyards canopy architecture.

Also related to wine-grape research, but from a different perspective and at a broader scale: I am part of the core of a large international group of scientists conducting the Grape Remote sensing Atmospheric Profile & Evapotranspiration eXperiment ([GRAPEX](#); [#45](#)). This long-term, large-scale, initiative aims to better understand the complex water and energy partitioning regimes in wine-grape vineyards and develop multi-scale monitoring protocols to increase yield quality and water use efficiency. GRAPEX is conducted at several vineyards over a climatic gradient in California, USA, and involves continuous measurements and intensive observation periods. Within this framework, I have studied the processes governing the partitioning of evapotranspiration into soil evaporation and vine transpiration [#56](#) by exploring and modeling the micro-scale spatial variability in solar radiation [#47](#) and [#50](#), soil heat flux [#51](#), and within-field advection [#43](#). GRAPEX's outcomes are summarized in a [Special Issue](#) I co-edited (and co-authored the Forward of [#49](#)), published in *Irrigation Science* (Q1) in 2019. I also co-edit an additional, forthcoming, [Special Issue](#) in *Irrigation Science*, summarizing further findings of GRAPEX. The potential application of this project, and

the interest the viticulture industry shows in it, are reflected by the generous support the research receives from E&J Gallo, one of the largest wineries in the world, which includes funding, technical help, human resources, and access to vineyards.

Other national and international collaborative activities, and community service. I am a great believer in the strength of team efforts and their potential to push science frontiers and achieve synergistic outcomes. I thus developed, and continue developing, multidisciplinary research with ecologists, plant physiologists, biochemists, hydrologists, physicists, and others. In addition to my role in the GRAPEX project, I am currently collaborating with German physicists to assess the potential of Cosmic-Ray Neutron Sensing for quantifying NRWIs. This research has been funded by the German Federal Ministry of Education and Research (BMBF; grant [20-12-0030](#)). I have also collaborated with American material engineers, aiming to improve the efficiency of dew water harvesting with multifunctional surfaces ([BGU-NU-UofC](#) collaborative research). Together with Merav Seifan, a BIDR/BGU ecologist, we explore whether the [True Rose of Jericho](#) harvests dew and/or fog. I have recently developed a new collaboration with a French atmospheric modeler to investigate the effects of greenhouse structure expansion on the micro-climate in nearby settlements. Lastly (for now), as part of the [ISF proposal](#) I was granted, I am collaborating with a Namibian terrestrial environmentalist and a Namibian plant physiologist, as well as with a Moroccan hydrologist and a Moroccan remote sensing specialist.

Recognizing my multiple international ties, I was recently elected the [Director of BIDR's Blaustein Center for Scientific Cooperation](#) (BCSC). BCSC fosters collaboration with the international scientific community through various programs and funding opportunities. I was also nominated the [Head of the Bachelor's Committee](#) of BGU's newly established School of Sustainability and Climate Change, and am taking part in leading the development of undergraduate programs aiming to prepare students to deal with aspects of the climate change crisis. Outside the academia, I am serving as a [member of the Board of Directors and the Audit Committee](#) of the [Water Corporation](#) of the Bedouin villages (an underrepresented minority group of previously nomad people). This challenging community service has opened my eyes to real-life water issues from a problem-solving-oriented perspective.

In summary, the >\$2,000,000 I was granted since my appointment as a faculty member of FAAB/BIDR/BGU nine years ago, has set the foundations for my activities. I equipped my lab with state-of-the-art instrumentation, and funded, to date, five postdocs, six PhD, and eleven MSc students. My research of the physical environment in natural and agricultural ecosystems is mainly focused on basic science, but incorporates applicative aspects. In natural settings, my research aims to better understand the ecosystem functioning of drylands and its contribution to greenhouse gas emissions in a changing world; my agricultural research is directed towards improving yield efficiency and quality.

Teaching statement

Today's students belong to the Millennial (Y; born 1981-1996) and post-Millennial (Z; born 1996-2012) generations. The Y generation has migrated into the digital world during their early childhood, and the Z generation was born into it. Both are generally perceived as multi-taskers with a somewhat limited attention span. They are independent and demanding consumers and will have jobs that do not exist in today's world. It is quite fashionable to criticize their attitude and learning skills and to worry about their future.

My perspective (also as a mother of two right at the interface between these generations) is different. I admire their creativity, their autodidactic abilities, their courage to walk off paved paths. Watching the world changing so fast, I realize I don't have all the answers. I have no idea what the keys to success will be twenty years from now. I therefore believe that we, as educators, should be flexible, observant, and trusting. In my

view, my prime role as an educator is to teach students to think, approach a problem, analyze, integrate, turn data into knowledge, and finally communicate their findings. I seek to instill in students the joy of exploring, the importance of continuously expanding their horizons, and their ability and right to shape their own future.

This philosophy is guiding me when teaching both undergraduate and graduate classes and mentoring my graduate students. I teach two **frontal courses**, one for undergraduates (spatial modeling of hydrometeorology) and one for graduates (Hydrometeorology). In both, I impel active learning by creating an inviting atmosphere for questions and discussion, and by in-class and at-home exercises, both in groups and individually. The courses culminate in a creative assignment – pairs of students choose one of the topics covered in class and present it to the class in whatever way they want. Last year, for example, one team decided to perform a puppet show, while another group built a physical model of a phenomenon. This year, one group taught a complex topic by inviting the class to play musical chairs. It was fun for the students, both those presenting and the audience. It was fun for me too! The students ranked both courses 5/5.

In addition to these frontal courses, I also teach two graduate courses that are more **hands-on research oriented**. The first, "Are models correct or are measurements" is conducted jointly with Dr. John Prueger of the USDA/ARS Soil, Water & Air Resources Research lab. (Iowa, USA). Environmental modelers typically validate their model outputs with field measurements. Often, they don't have the detailed understanding to judge the quality of the measurements, and the accuracy and limitations of the data. During the course, we highlight the importance of critical and careful usage of measured data. We do it both in the field when the students work with the instrumentation, and in class, where they need to analyze the data they have collected.

The last course I teach, and probably the jewel in the crown, is "Biophysical Field Methods," which culminates in a 2-week concentrated field workshop at the Gobabeb-Namib Research Institute in the Namib Desert, Namibia. The course aims to expose students to micrometeorological variables that affect animals and plants in the environments in which they live, as well as teach them how to measure these variables and analyze their effects. I teach the course together with Prof. Emeritus Berry Pinshaw (BGU), Prof. Scott Turner (Retired from State University of New York college) and Drs. Eugene Marais and Gillian Maggs-Kölling (from Gobabeb). The course brings together Israeli, Namibian, South-African, and American students, who work long hours in the field exploring multiple environmental questions. The students are grouped into teams that work independently towards setting up pre-determined experiments and conduct the measurements. Every evening, we meet in the Tea Room for a round-table discussion, when all groups present their activities and insights. The workshop concludes with the production of posters made by each group, summarizing the results of the project. The posters are presented in a happening open to all Gobabeb's staff and students. Space is insufficient to describe the many aspects by which students are enriched. In addition to the obvious exposure to methods to quantify relevant environmental conditions, the students become acquainted with a unique hyper-arid environment, experience the challenges in conducting research in a remote place, and get to know peers from diverse backgrounds. Judging by the students' feedbacks, this course is memorable and empowering (even a "once in a lifetime experience", as described by one of the students).

Another significant part of my educational activities is **mentoring graduate students**. One of the most prominent characteristics of our international graduate school for desert studies (AKIS) is its variegated composition of students, arriving literally from all over the world. I have mentored students from Ethiopia, Canada, China, Israel, Germany, Ghana, the US, the Czech Republic, Jordan, and the Netherlands. From all, I have learned. My goal as a mentor is to facilitate a positive and supportive environment and help each student fulfil their potential. Several of my MSc students have summarized their results in publications. Some were the lead authors (Anat Florentin, Israel, [[#42](#)] and Isaac Kramer, USA, [[#53](#)]), others were co-authors (Solomon Leake, Ethiopia, [[#38](#)] and Natasha Walbourn, Canada, [[#41](#)]). All my graduated PhD students

have published in top-tier journals (Dilia Kool, the Netherlands, [[#26](#), [#29](#), [#37](#), [#40](#) from her PhD], Noam Reshef, Israel, [[#41](#), [#44](#), [#46](#)], and Kelem Gashu, Ethiopia, [[#55](#), [#59](#)]). I encourage all my students to present in national and international meetings. I believe that mutual coffee breaks and corridor discussions are more stimulating than formal presentations, both in conferences and in the lab's daily routine. Accordingly, my office door is always open, and I am happy to spend time in informal discussions with my students, one-on-one and in groups. I try to make the lab their second home, just as it is mine.

Whether they belong to the Y or Z generation, I enjoy my interaction with these emerging scientists. They had a different childhood, and they will become different adults. But I am fully confident they will become at least as good professionals. Teaching and mentoring are not only part of my duties as an academic; they are two of the reasons I love my profession so much.

Professional activities

(a) Positions in academic administration (departmental, faculty and university)

2021-present	<i>Head</i> , Bachelors Committee, The Goldman Sonnenfeld School of Sustainability and Climate Change, BGU
2021-present	<i>Director</i> , Blaustein Center for Scientific Cooperation, BIDR, BGU
2019-present	<i>Director</i> , Wadi Mashash Experimental Farm, BIDR, BGU
2019-2022	<i>Member of the Senate</i> of BGU
2013-present	<i>Member of the teaching committee</i> of the Irrigation and Plant Environment program, Albert Katz International School for Desert Studies (AKIS), BIDR, BGU
2020-2021	<i>Steering committee member</i> , Blaustein Center for Scientific Cooperation, BIDR, BGU

(b) Professional functions outside universities/institutions

2011-present	<i>Member of the Board of Directors</i> , Neve Midbar Water Corporation of the Bedouin villages
2020-present	<i>Member of the Audit Committee</i> , Neve Midbar Water Corporation of the Bedouin villages
2021-present	<i>Member of the scientific committee</i> , 9 th International Conference on Fog, Fog Collection and Dew, 23-28 July, 2023, Fort Collins, CO, USA.
2021	<i>Member of a PhD Approval Committee</i> , Weizmann Institute of Science, Israel
2020	<i>Academia representative</i> in committee for recruiting a research scientist at Agricultural Research Organization, call #00070586, May 2020.
2019	<i>Member of the scientific committee</i> , The 13 th Dahlia Greidinger International Symposium 2019, 4-6 March, 2019, Technion, Israel
2019	<i>Member of the scientific committee</i> , 8 th International Conference on Fog, Fog Collection and Dew, 14-19 July, 2019, Taipei, Taiwan.
2016-2019	<i>Vice President</i> , International Fog and Dew Association (IFDA)
2017	<i>Sessions convener</i> , Efficient use of water; and Vineyard-environment interactions; Deserts, Drylands, and Desertification, November 2017, Sede-Boqer, Israel.
2016	<i>Member of the scientific committee</i> , 7 th International Conference on Fog, Fog Collection and Dew, 24-29 July, 2016, Wroclaw, Poland.
2016	<i>Session co-convener</i> , Biogeochemistry and ecohydrology of arid, semi-arid and drought subjected ecosystems, European Geoscience Union General Assembly, 17-22 April, 2016, Vienna, Austria.
2015	<i>Member of the organizing committee</i> , 10th European Conference on Precision Agriculture, 12-16 July, 2015, Beit-Dagan.
2013	<i>Convener</i> , Workshop on Scintillometry – Theory and Applications, 26-27 May, 2013, Sede-Boqer, Israel.
2009	<i>Member of the organizing committee</i> , International Symposium on Olive Irrigation and Oil Quality, 6-10 December, 2009, Nazareth.

(c) Editor or member of editorial board of scientific or professional journal

- 2020-present Joint Guest Editor of a special issue "From vine to vineyard: the GRAPEX multi-scale remote sensing experiment for improving irrigation management" in *Irrigation Science*, with William P. Kustas, Andrew McElrone, and Kyle Knipper
- 2020-present Joint Guest Editor of a special issue "Advances in Fog and Dew Life Cycle and Dynamics in the Hydrological Cycle" in *Journal of Hydrology*, with Martial Haeffelin, Jan Cermak, Christine Lac, and Lixin Wang
- 2019-present Member of the Editorial Board of *Agricultural and Forest Meteorology*
- 2018-2019 Joint Guest Editor of a special issue "Water and energy exchange in vineyards: the GRAPEX project" in *Irrigation Science*, with William P. Kustas and Samuel Ortega Farias

(d) Ad-hoc reviewer for journals (last 5 years)

Agricultural and Forest Meteorology ♦ Journal of Hydrometeorology ♦ Water Resources Research ♦ Journal of Hydrology ♦ Soil Science Society of America Journal ♦ Remote Sensing of Environment ♦ Journal of Arid Environment

Educational activities

(a) Courses taught

- 2017-2020 Biophysical field methods, graduate students, Albert Katz International School for Desert Studies (AKIS), BGU along with Namibian and South-African students, conducted in Gobabeb desert, Namibia (4 credit points; course #001-2-3135; lead: Prof. Berry Pinshaw)
- 2014-present Hydrometeorology, graduate students, Albert Katz International School for Desert Studies (AKIS), BGU (3 credit points; course # 001-2-5030)
- 2015-present Spatial models in hydrometeorology, undergraduate students, Department of Geography and Environmental Development, BGU (3 credit points; course # 001-1-9201)
- 2016-present Sustainable agricultural solutions, foreign graduate students, summer course, BIDR, BGU (participating lecturer)
- 2020-present Calculating the Aridity Index from meteorological time series – Guided reading and hands-on calculations course, graduate students, Albert Katz International School for Desert Studies (AKIS), BGU (2 credit points; course # 001-2-2301)
- 2018 Are model computations correct or are measurements? – how to assess the quality of energy balance measurements, graduate students, Albert Katz International School for Desert Studies (AKIS), BGU (2 credit points; course # 001-2-2072; with Dr. John Prueger)
- 2013-2015 Soil-plant-atmosphere continuum in arid regions, foreign graduate students, summer course, BIDR, BGU (participating lecturer)
- 2014-2016 Departmental seminar (coordinator)
- 2015 Water use efficiency in agriculture (coordinator), graduate students, concentrated course, AKIS, BGU
- 2004-2005 Dynamic Geomorphology, undergraduate and graduate students, Department of Geography and Environmental Development, BGU (with Prof. Jonathan Laronne)
- 2003-2005 Quantitative methods for Geographers (B), undergraduate students, Department of Geography and Environmental Development, BGU

(b) Research students

Post-doctoral fellows

1. Dilia Kool, 2015-2016, Effect of advection on the energy-balance components in an isolated drip-irrigated wine-vineyard in the desert
2. Lei Jiang, 2016-2017, Effect of non-rainfall water inputs on global-scale meteorological models
3. Hanna Huryna, 2017-2019, Application of thermal images in precision irrigation management

4. Dilia Kool, 2018-present, A global assessment of non-rainfall water inputs in the world's desert soils
5. Camille Labrousse, 2022-present, Will greenhouse area expansion affect human thermal comfort in the Jordan and Arava valleys?

PhD students

1. Dilia Kool, 2011-2015 (Jointly with Naftali Lazarovitch and Alon Ben-Gal), Evapotranspiration and its partitioning in an isolated drip-irrigated wine-vineyard in the desert
2. Noam Reshef, 2014-2019 (Jointly with Aaron Fait), Modulation of the yield and fruit chemical composition of grapevine as affected by rootstock and bunch microclimate
3. Kelem Gashu Alamrie, 2017-2021 (Jointly with Aaron Fait), Variability in phenology and berry metabolism of wine grapevine varieties grown in a desert environment
4. Nadav Bekin, 2020-present, Soil-atmosphere CO₂ exchange initiated by non-rainfall inputs in a desert soil
5. Elnathan Golan, 2021-present (Jointly with Ran Erel, ARO, and Avner Gross, BGU), Direct nutrient uptake from dust accumulating on plant canopies

MSc students

1. Lemlem Solomon Leake, 2013-2015, The efficiency of trenches as runoff water harvesting system and the role of their design in minimizing water loss
2. Anat Florentin, 2013-2016, Depicting non-rainfall-water-inputs-derived latent heat flux with turbulence-based methods
3. Anxia Jiang, 2014-2016 (Jointly with Pedro Berliner), Effect of soil type and cover on non-rainfall water inputs
4. Natasha Walbaum, 2014-2016, Zooming in on desert viticulture: manipulating bunch microclimate to enhance grape quality
5. Mirjam Westram, 2015-2017, Can we define a Metabolic Active Radiation?
6. Isaac Kramer, 2015-2017 (Jointly with Pedro Berliner), Modeling of runoff water systems efficiency
7. Yasmin Levi, 2018-2020, The effect of row orientation on momentum fluxes in wine vineyards canopy
8. Yasmeen Saleem, 2018-2021 (Jointly with Pedro Berliner), Effect of crust on infiltration and evaporation rates over loess soil
9. Ofer Galkin, 2019-present (Jointly with Naftali Lazarovitch), Effect of emissivity on amount and duration of dew formation
10. Martha Osei-Yeboah, 2020-present (Jointly with Ilya Gelfand), Nutrient limitation to soil microbial activity in the Negev Desert
11. Yuval Siboni, 2021-present, Does the Rose of Jericho harvest dew and/or fog?

Awards, citations, honors, fellowships

(a) Honors, Citation, Awards

1991-1993	BGU – University scholarship for <i>excellence</i> in high-school matriculation exams
1994	BGU – Certificate of recognition for <i>academic achievements</i>
2003	<i>Best poster award</i> – Israeli Geographical Association annual meeting
2014	<i>Outstanding reviewer</i> for Agricultural and Forest Meteorology, April 2014
2015	The Elias and Frances Margolin <i>Career Development Chair</i> in Environmental Desert Studies and Research
2016	<i>Best poster award</i> – 10 th International Symposium on Grapevine Physiology and Biotechnology
2016	<i>Prize for scientific originality</i> – 7 th International Conference on Fog, Fog Collection and Dew
2018	<i>Outstanding reviewer</i> for Agricultural and Forest Meteorology, February 2018

Scientific publications

Publication metrics (updated 1 October 2022)

Publication metrics include article #1 by my previous family name Ninari (Researcher ID E-1836-2013)

(a) H-index

28 by ISI
32 by Google Scholar

(b) Number of citations

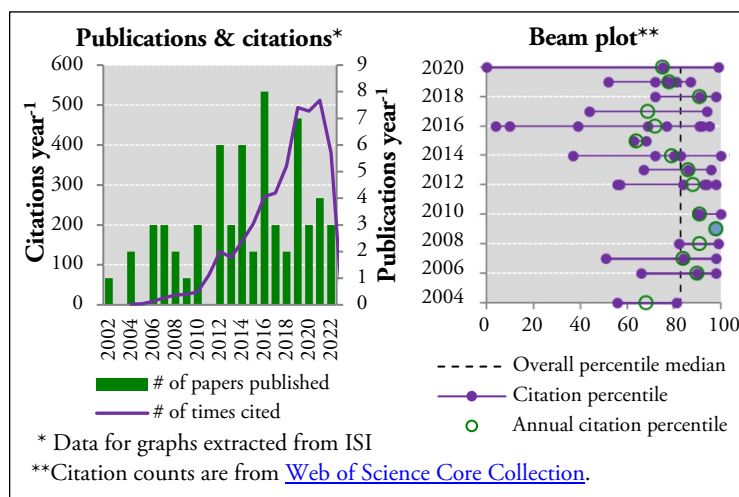
3,577 by ISI
 AVG citation/item: **55.0**
5,286 by Google Scholar

(c) Citations without self-citations

3,424 by ISI
5,133 by Google Scholar

(d) Journal ranking of published papers

Number of papers published in:	Q1	Q2	Q3	Q4	Total
Total	52	6	4	0	62
Since last promotion	17	0	0	0	17



- **4 papers** awarded *Highly Cited Paper* by ISI: top 1% of its academic field based on a highly cited threshold for the field and publication year
- **2 papers** were listed in the *2019 Most Downloaded Articles in Irrigation Science*
- **1 paper** was listed in the *10 top cited papers published in Advances in Water Resources in 2012/2013*



List of publications

(a) Book chapters

- [1] Kustas W.P., Agam N. Soil Evaporation. 2013. In: Wang Y.Q. (Ed.). *Encyclopedia of Natural Resources*. Taylor & Francis, New-York.
- [2] Behrendt T., Agam N., Horn M.A. 2019. Microbial Nitric Oxide, Nitrous Oxide, and Nitrous Acid Emissions from Drylands. In: D'Odorico P. et al. (eds.). *Dryland Ecohydrology*, Springer Nature Switzerland AG, DOI: 10.1007/978-3-030-23269-6_13.


(b) Refereed chapters in collective volumes, conference proceedings, festschrifts, etc.

- [1] Ninari (Agam) N., Zangvil A. and Berliner P.R. 1998. The contribution of dew to the water balance of bare soil in a desert area. First International Conference on Fog and Fog Collection, Vancouver, Canada. 265-268.
- [2] Ninari (Agam) N. and Berliner P.R. 2001. The role of dew in the water and heat balance of bare-soil in the Negev desert. Second International Conference on Fog and Fog Collection, St. John's, Canada. 321-324.
- [3] Faiman D., Karnieli A., Ninari (Agam) N., Melnichak V. and Jacob S. 2002. Using a natural AM1.5G spectrum to help define an AM1.5D spectrum appropriate for CPV purposes. Record of the Twenty-Ninth IEEE Photovoltaic Specialists Conference, 927-930.

- [4] Faiman D., Karnieli A., Ninari (Agam) N., Melnichak V., Karki I., Bett A.W., Siefer G., van der Borg N., Burgers A.R., Dunlop F.D., Farhi B., King D., Boyson W., Kratochvil J., Myers D., Olivieri J., Otani K., Sala G., Antonio I. and Pachon D. 2003. Measurement and comparison of the ratio, of the direct beam to normal hemispherical solar spectra, in various parts of the world. *Proceedings of 3rd World Conference on Photovoltaic Energy Conversion*, Vols A-C, 2255-2258.
- [5] Kustas W.P., Agam N., Anderson M.C., Li F.Q. and Colaizzi P.D. 2007. Potential errors in the application of thermal-based energy balance models with coarse resolution. *Remote Sensing for Agriculture, Ecosystems, and Hydrology IX* 6742, 74208-74208.
- [6] Agam N., Ben-Gal A., Kustas W.P., Cohen Y., Anderson M.C., and Alchanatis V. 2009. Thermal remote sensing of crop water status: pros and cons of two different approaches. *The Dhalia Greidinger International Symposium: Crop Production in the 21st Century: Global Climate Change, Environmental Risks and Water Scarcity*. Haifa, Israel.
- [7] Karnieli A., Agam N., Pinker R.T., Anderson M.C., Imhoff M.L., and Gutman G.G. 2009. Merits and limitations in assessing droughts by using long-term NDVI and LST. *MultiTemp 2009 - The Fifth International Workshop on the Analysis of Multi-temporal Remote Sensing Images*. Groton, Connecticut (USA), 194 – 204.
- [8] Ben-Gal A., Yermiyahu U., Zipori I., Hanoch E., Presnov E., Agam N., Dag A., Kerem Z., and L. Basheer. 2011. Determining Irrigation Levels for a Modern Israeli Olive Orchard: Towards Maximum Yields of High Quality Oil. *Proc. IS on Olive Irrigation and Oil Quality*, Eds.: U. Yermiyahu et al. *Acta Hort.* 888, ISHS, 47-52.
- [9] Rueger S., Ehrenberger W., Zimmermann U., Ben-Gal A., Agam N., Kool, D. 2011. The leaf patch clamp pressure probe: a new tool for irrigation scheduling and deeper insight into olive drought stress physiology. *Acta Horticulturae*, 888, 223-230.
- [10] Agam N., Cohen Y., Dag A., Yermiyahu U., Alchanatis V., Ben-Gal A. 2012. Assessing olive water status using thermal imaging. *OLIVEBIOTEQ 2011*, Chania, Crete, Greece. Oct 31 – Nov 4, 2011.
- [11] Cohen Y., Agam N., Klapp I., Karnieli A., Beer O., Alchanatis V., Sochen N. 2017. Future approaches to facilitate large-scale adoption of thermal based images as key input in the production of dynamic irrigation management zones. *Advances in Animal Biosciences: Precision Agriculture (ECPA)*, DOI:10.1017/S2040470017001352.
- [12] Gao R., Torres-Rua A., Nassar A., Alfieri J., Aboutalebi M., Hipps L., Bambach Ortiz N., Mcelrone A.J., Coopmans C., Kustas W.P., White A.W., McKee L., Alsina M., Dokoozlian N., Sanchez L., Prueger J.H., Nieto H., Agam N. 2021. Evapotranspiration partitioning assessment using a machine-learning-based leaf area index and the two-source energy balance model with sUAV information. *SPIE Defense and SPIE Commercial Sensing*, 11747, DOI: 10.1117/12.2586259.

(c) Refereed articles and refereed letters in scientific journals

- [1] **Ninari N.^S**, Berliner P.R.^{PI} 2002. The role of dew in the water and heat balance of bare Loess soil in the Negev Desert: Quantifying the actual dew deposition on the soil surface. *Atmospheric Research*, 64, 325-336. (69 citations; IF 5.695; 18/94 Meteorology and Atmospheric Sciences; **Q1**)
- [2] **Agam (Ninari) N.^S**, Berliner P.R.^{PI}, Zangvil A.^C, Ben-Dor E.^C 2004. Soil water evaporation during the dry season in an arid zone. *Journal of Geophysical Research – Atmosphere*, 109, D16103, doi:10.1029/2004JD004802. (31 citations; IF 5.217; 22/94 Meteorology & Atmospheric Science; **Q1**)
- [3] **Agam (Ninari) N.^S**, Berliner P.R.^{PI} 2004. Diurnal water content changes in the bare soil of a coastal desert. *Journal of Hydrometeorology*, 5, 922-933. (71 citations; IF 6.708; 25/94 Meteorology and Atmospheric Sciences; **Q1**)
- [4] Ben-Ze'ev E.^S, Karnieli A.^{PI}, **Agam N.^S**, Kaufman Y.^C, Holben B.^C 2006. Assessing vegetation condition in the presence of biomass burning smoke by applying the aerosol-free vegetation index


- (AFRI) on MODIS images. *International Journal of Remote Sensing*, 27, 3203–3221. (27 citations; IF 3.531; 11/28 Imaging Science & Photogrametric Technology; **Q2**)
- [5] **Agam N.**^{PD}, Kustas W.P.^{PI}, Anderson M.C.^C, Li F.^{PD}, Neale C.M.U.^C 2007. A vegetation index based technique for spatial sharpening of thermal imagery. *Remote Sensing of Environment*, 107, 545–558. (295 citations; IF 13.850; 10/279 Environmental Sciences; **Q1**)
- [6] Karnieli A.^{PI}, Bayasgalan M.^{PD}, Bayarjargal Yu.^C, **Agam N.**^S, Khudulmur S.^C, Tucker C.J.^C 2006. Comments on the use of the Vegetation Health Index over Mongolia. *International Journal of Remote Sensing*, 27, 2017–2024. (106 citations; IF 3.531; 11/28 Imaging Science & Photogrametric Technology; **Q2**)
- [7] **Agam N.**^S, Berliner P.R.^{PI} 2006. Dew formation and water-vapor adsorption in semi-arid environments - a review. *Journal of Arid Environments*, 65, 572–590. (289 citations; IF 2.211; 189/279 Environmental Sciences; **Q3**)
- [8] Katata G.^S, Haruyasu N.^{PI}, Ueda H.^C, **Agam N.**^{PD}, Berliner P.R.^C 2007. Development of a land surface model including evaporation and adsorption processes in the soil for the land-air exchange at arid regions. *Journal of Hydrometeorology*, 8, 1307–1324. (24 citations; IF 4.871; 25/94 Meteorology and Atmospheric Sciences; **Q2**)
- [9] **Agam N.**^{PD}, Kustas W.P.^{PI}, Anderson M.C.^C, Li F.^{PD}, Colaizzi P.D.^C 2007. Utility of thermal sharpening over Texas High Plains irrigated agricultural field. *Journal of Geophysical Research – Atmosphere*, 112, D19110, doi:10.1029/2007JD008407. (74 citations; IF 5.217; 22/94 Meteorology & Atmospheric Sciences; **Q1**)
- [10] **Agam N.**^{PD}, Kustas W.P.^{PI}, Anderson M.C.^C, Li F.^{PD}, Colaizzi P.D.^C 2008. Utility of thermal image sharpening for monitoring field-scale evapotranspiration over rainfed and irrigated agricultural regions. *Geophysical Research Letters*, 35, L02402, doi:10.1029/2007GL032195. (56 citations; IF 5.576; 25/201 Geosciences, Multidisciplinary; **Q1**)
- [11] Anderson M.C.^{PI}, Norman J.M.^C, Kustas W.P.^C, Houborg R.^{PD}, Starks P.J.^C, **Agam N.**^{PD} 2008. A thermal-based remote sensing technique for routine mapping of land-surface carbon, water and energy fluxes from field to regional scales. *Remote Sensing of Environment*, 112, 4227–4241. (317 citations; IF 13.850; 10/279 Environmental Sciences; **Q1**)
- [12] Ben-Gal A.^{PI}, **Agam N.**^{PD}, Alchanatis V.^C, Cohen Y.^C, Yermiyahu U.^C, Zippori Y.^T, Presnov E.^T, Sprintsin M.^{PD}, Dag A.^C 2009. Evaluating water stress in irrigated olives: correlation of soil water status, tree water status, and thermal imagery. *Irrigation Science*, 27, 367–376. (110 citations; IF 3.519; 19/90 Agronomy; **Q1**)
- [13]  Karnieli A.^{PI}, **Agam N.**^C, Pinker R.T.^C, Anderson M.C.^C, Imhoff M.L.^C, Gutman G.G.^C, Panov N.^T, Goldberg A.^T 2010. Use of NDVI and land surface temperature for drought assessment: merits and limitations. *Journal of Climate*, 23, 618–633. (459 citations; IF 5.380; 20/94 Meteorology and Atmospheric Sciences; **Q1**; *Awarded Highly Cited Paper by ISI: top 1% of its academic field based on a highly cited threshold for the field and publication year*)
- [14] **Agam N.**^{PD}, Kustas W.P.^{PI}, Anderson M.C.^C, Norman J.M.^C, Colaizzi P.D.^C, Howell T.A.^C, Prueger J.H.^C, Meyers T.^C, Wilson T.^C 2010. Application of the Priestley-Taylor approach in a two-source surface energy balance model. *Journal of Hydrometeorology*, 11, 185–198. (87 citations; IF 4.871, 25/94 Meteorology and Atmospheric Sciences; **Q2**)
- [15] Ben-Gal A.^{PI}, Kool D.^S, **Agam N.**^{PD}, van Halsema G.E.^C, Yermiyahu U.^C, Yafe A.^T, Presnov E.^T, Erel R.^S, Majdop A.^C, Zipori I.^T, Segal E.^{PD}, Rüger S.^S, Zimmermann U.^C, Cohen Y.^C, Alchanatis V.^C, Dag A.^C 2010. Whole-tree water balance and indicators for short-term drought stress in non-bearing 'Barnea' olives. *Agricultural Water Management*, 98, 124–133. (54 citations; IF 6.611; 11/100 Water Resources; **Q1**)
- [16] **Agam N.**^{PI}, Evett S.R.^{PI}, Tolck J.A.^C, Kustas W.P.^{PI}, Colaizzi P.D.^C, Alfieri J.G.^C, McKee L.G.^C, Copeland K.S.^C, Howell T.A.^C, Chávez J.L.^C 2012. Evaporative loss from irrigated interrows in a

- highly advective semi-arid agricultural area. *Advances in Water Resources*, 50, 20-30. (68 citations; IF 5.361; 19/100 *Water Resources*; **Q1**)
- [17] **Agam N.**^{PI}, Kustas W.P.^{PI}, Evett S.R.^{PI}, Colaizzi P.D.^C, Cosh M.^C, McKee L.G.^T 2012. Soil heat flux variability influenced by row direction in irrigated cotton. *Advances in Water Resources*, 50, 31-40. (17 citations; IF 5.361; 19/100 *Water Resources*; **Q1**)
- [18] Evett S.R.^{PI}, **Agam N.**^C, Kustas W.P.^C, Colaizzi P.D.^C, Schwartz R.C.^C 2012. Soil profile method for soil thermal diffusivity, conductivity and heat flux: Comparison to soil heat flux plates. *Advances in Water Resources*, 50, 41-54. (45 citations; IF 5.361; 19/100 *Water Resources*; **Q1**)
- [19] Alfieri J.G.^{PI}, Kustas W.P.^{PI}, Prueger J.H.^C, Hipps L.E.^C, Evett S.R.^C, Basara J.F.^C, Neale C.M.U.^C, French A.N.^C, Colaizzi P.D.^C, **Agam N.**^C, Chavez J.L.^C, Howell T.A.^C 2012. On the discrepancy between eddy covariance and lysimetry-based surface flux measurements under strongly advective conditions. *Advances in Water Resources*, 50, 62-78. (76 citations; IF 5.361; 19/100 *Water Resources*; **Q1**, *10 top cited papers published in Advances in Water Resources in 2012/2013*)
- [20] Prueger J.H.^{PI}, Alfieri J.G.^C, Hipps L.E.^C, Kustas W.P.^C, Chavez J.L.^C, Evett S.R.^C, Anderson M.C.^C, French A.N.^C, Neale C.M.U.^C, McKee L.G.^C, Hatfield J.L.^C, Howell T.A.^C, **Agam N.**^C 2012. Patch scale turbulence over dryland and irrigated surfaces in a semi-arid landscape during BEAREX08. *Advances in Water Resources*, 50, 106-119. (17 citations; IF 5.361; 19/100 *Water Resources*; **Q1**)
- [21] Colaizzi P.D.^{PI}, Kustas W.P.^C, Anderson M.C.^C, **Agam N.**^C, Tolck J.A.^C, Evett S.R.^C, Howell T.A.^C, Gowda P.H.^C, O'Shaughnessy S.A.^C 2012. Two-source energy balance model estimates of evapotranspiration using component and composite surface temperatures. *Advances in Water Resources*, 50, 134-151. (125 citations; IF 5.361; 19/100 *Water Resources*; **Q1**)
- [22] **Agam N.**^{PI}, Cohen Y.^C, Berni J.A.J.^C, Alchanatis V.^C, Kool D.^S, Dag A.^C, Yermiyahu U.^C, Ben-Gal A.^{PI} 2013. An insight to the performance of crop water stress index for olive trees. *Agricultural Water Management*, 118, 79-86. (68 citations; IF 6.611; 11/100 *Water Resources*; **Q1**)
- [23] Holland S.^S, Heitman J.L.^{PI}, Howard A.^S, Sauer T.J.^C, Giese W.^C, Ben-Gal A.^C, **Agam N.**^C, Kool D.^S, and Havlin J.^C 2013. Micro-Bowen ratio system for measuring evapotranspiration in a vineyard interrow. *Agricultural and Forest Meteorology*, 117, 93-100. (32 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [24] **Agam N.**^{PI}, Cohen Y.^C, Alchanatis V.^C, Ben-Gal A.^{PI} 2013. How sensitive is the CWSI to changes in solar radiation? *International Journal of Remote Sensing*, 34, 6109-6120. (28 citations; IF 3.531; 11/28 *Remote Sensing*; **Q2**)
- [25] Colaizzi P.D.^{PI}, **Agam N.**^C, Tolck J.A.^C, Evett S.R.^C, Howell T.A.^C, Gowda P.H.^C, O'Shaughnessy S.A.^C, Kustas W.P.^{PI}, and Anderson M.C.^C 2014. Two source energy balance model to calculate E, T, and ET: Comparison of Priestley–Taylor and Penman–Monteith formulations and two time scaling methods. *Transactions of the American Society of Agricultural and Biological Engineers*, 57, 479-498. (54 citations; IF 1.238; 10/14 *Agricultural Engineering*; **Q3**)
- [26] Kool D.^S, **Agam N.**^{PI}, Lazarovitch N.^{PI}, Heitman J.^C, Sauer T.^C, Ben-Gal A.^{PI} 2014. A review of approaches for evapotranspiration partitioning. *Agricultural and Forest Meteorology*, 184, 56-70. (387 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**, *Awarded Highly Cited Paper by ISI: top 1% of its academic field based on a highly cited threshold for the field and publication year*)
- [27] **Agam N.**^{PI}, Segal E.^{PD}, Peeters A.^{PD}, Levi A.^T, Dag A.^C, Yermiyahu U.^C, Ben-Gal A.^{PI} 2014. Spatial distribution of water status in irrigated olive orchards by thermal imaging. *Precision Agriculture*, 15, 346–359. (20 citations; IF 5.767; 7/59 *Agriculture, Multidisciplinary*; **Q1**)
- [28] Holland S.^S, Howard A.^S, Heitman J.L.^{PI}, Giese W.^C, Sutton T.^C, **Agam N.**^C, Ben-Gal A.^C, Havlin J.L.^C, Sauer T.J.^{PI} 2014. Implications of tall fescue for inter-row water dynamics in a vineyard. *Agronomy Journal*, 106, 1267-1274. (5 citations; IF 2.650; 27/90 *Agronomy*; **Q2**)

- [29] Kool D.^S, Ben-Gal A.^{PI}, **Agam N.**^{PI}, Šimůnek J.^C, Heitman J.L.^C, Sauer T.J.^C, Lazarovitch N.^{PI} 2014. Spatial and diurnal below canopy evaporation in a desert vineyard: measurements and modeling. *Water Resources Research*, 50, doi:10.1002/ 2014WR015409. (32 citations; IF 6.159; 13/100 *Water Resources*; **Q1**)
- [30] **Agam N.**^{PI} 2014. Comment on "Microlysimeter station for long term non-rainfall water input and evaporation studies" by Uclés et al. *Agricultural and Forest Meteorology*, 194, 255-256. (4 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [31] Rozenstein O.^S, **Agam N.**^{PI}, Serio C.^C, Masiello G.^C, Venafrá S.^C, Achal S.^C, Puckrin E.^C, Karnieli A.^{PI} 2015. Diurnal emissivity dynamics in bare versus biocrusted sand dunes. *Science of the Total Environment*, 506-507, 422-429. (25 citations; IF 10.753; 26/279 *Environmental Sciences*; **Q1**)
- [32] Kustas W.P.^{PI}, Alfieri J.D.^C, **Agam N.**^C, Evett S.R.^C 2015. Quantifying variability in field-scale evapotranspiration measurements in an irrigated agricultural region under advection. *Irrigation Science*, 33, 325-338. (13 citations; IF 3.519; 19/90 *Agronomy*; **Q1**)
- [33] Colaizzi P.D.^{PI}, Evett S.R.^C, **Agam N.**^C, Schwartz R.C.^C, Kustas W.P.^C, Cosh M.H.^C, McKee L.^C 2016. Soil heat flux calculation for sunlit and shaded surfaces under row crops: 1. model development and sensitivity analysis. *Agricultural and Forest Meteorology*, 216, 115-128. (17 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [34] Colaizzi P.D.^{PI}, Evett S.R.^C, **Agam N.**^C, Schwartz R.C.^C, Kustas W.P.^C, Cosh M.H.^C, McKee L.^C 2016. Soil heat flux calculation for sunlit and shaded surfaces under row crops: 2. model test. *Agricultural and Forest Meteorology*, 216, 129-140. (13 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [35] Colaizzi P.D.^{PI}, **Agam N.**^C, Tolck J.A.^C, Evett S.R.^C, Howell T.A. Sr.^C, O'Shaughnessy S.A.^C, Gowda P.H.^C, Kustas W.P.^C, Anderson M.C.^C 2016. Advances in a two-source energy balance model: partitioning of evaporation and transpiration for row crops. *Transactions of the American Society of Agricultural and Biological Engineers*, 59, 181-197. (12 citation; IF 1.238; 10/14 *Agricultural Engineering*; **Q3**)
- [36] Bustan A.^{PI}, Dag A.^C, Yermiyahu U.^C, Erel R.^S, Presnov E.^T, **Agam N.**^C, Kool D.^S, Iwema J.^C, Zipori I.^T, Ben-Gal A.^{PI} 2016. Fruit load governs transpiration of olive trees. *Tree Physiology*, 00, 1-12. (33 citations; IF 4.561; 5/69 *Forestry*; **Q1**)
- [37] Kool D.^{PD}, Kustas W.P.^C, Ben-Gal A.^C, Lazarovitch N.^C, Heitman J.L.^C, Sauer T.J.^C, **Agam N.**^{PI} 2016. Energy and evapotranspiration partitioning in a desert vineyard. *Agricultural and Forest Meteorology*, 218-219, 277-287. (37 citations; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [38] **Agam N.**^{PI}, Leake L.S.^S, Berliner P.R.^C 2016. Modeling short wave solar radiation in a trench water harvesting system. *Agricultural and Forest Meteorology*, 221, 152-163. (1 citation; IF 6.424; 4/108 *Meteorology and Atmospheric Sciences*; **Q1**)
- [39] Song L.S.^{PD}, Kustas W.P.^{PI}, Liu S.M.^C, Colaizzi P.D.^C, Nieto H.^C, Xu Z.W.^C, Ma Y.F.^C, Li M.S.^C, Xu T.R.^C, **Agam N.**^C, Tolck J.A.^C, Evett S.R.^C 2016. Applications of a thermal-based two-source energy balance model using Priestley-Taylor approach for surface temperature partitioning under advective conditions. *Journal of Hydrology*, 540, 574-587. (41 citations; IF 6.708; 9/100 *Water resources*; **Q1**)
- [40] Kool D.^S, Heitman J.L.^C, Lazarovitch N.^C, **Agam N.**^C, Sauer T.J.^C, Ben-Gal A.^{PI} 2016. In-situ thermistor calibration for improved measurement of soil temperature gradients. *Soil Science Society of America Journal*, 80, 1514-1519. (1 citation; IF 2.932; 23/39 *Soil science*; **Q3**)
- [41] Reshef N.^S, Walbaum N.^S, **Agam N.**^{PI} [§], Fait A.^{PI} [§] 2017. Sunlight modulates fruit metabolic profile and shapes the spatial pattern of compound accumulation within the grape cluster. *Frontiers in Plant Science*, doi: 10.3389/fpls.2017.00070. (44 citations; IF 6.627; 20/238 *Plant sciences*; **Q1**; *Awarded Highly Cited Paper by ISI, July/August 2017: top 1% of its academic field based on a highly cited threshold for the field and publication year*)



[§] Shared corresponding authors

- [42] Florentin A.^S, **Agam N.**^{PI} 2017. Estimating non-rainfall-water-inputs-derived latent heat flux with turbulence-based methods. *Agricultural and Forest Meteorology*, 247, 533-540. (6 citations; IF 6.424; 4/108 Meteorology and Atmospheric Sciences; **Q1**)
- [43] Kool D.^{PD}, Ben-Gal A.^C, **Agam N.**^{PI} 2018. Within-field advection enhances evaporation and transpiration in a vineyard in an arid environment. *Agricultural and Forest Meteorology*, 255, 104-113. (11 citations; IF 6.424; 4/108 Meteorology and Atmospheric Sciences; **Q1**)
- [44] Reshef N.^S, **Agam N.**^{PI}[‡], Fait A.^{PI}[‡] 2018. Grape berry acclimation to excessive solar irradiance leads to repartitioning between major flavonoid groups. *Journal of Agricultural and Food Chemistry*, 66, 3624-3636. (26 citations; IF 5.895; 6/59 Agriculture, multidisciplinary; **Q1**)
- [‡] *Shared corresponding authors*
- [45] Kustas W.P.^{PI}, Anderson M.C.^C, Alfieri J.G.^C, Knipper K.^S, Torres-Rua A.^C, Parry C.K.^S, Nieto H.^{PD}, **Agam N.**^C, White A.^C, Gao F.^C, McKee L.^C, Prueger J.H.^C, Hipps L.E.^C, Los S.^S, Alsina M., Sanchez L.^C, Sams B.^C, Dokoozlian N.^C, Jones S.^C, McKee M.^T, McElrone A.^S, Heitman J.L.^C, Howard A.^T, Post K.^S, Melton F.S.^C, Hain C.^C 2018. The Grape Remote sensing Atmospheric Profile and Evapotranspiration eXperiment (GRAPEX). *Bulletin of the American Meteorological Society*, 99, 1791-1812. (73 citations; IF 9.116; 6/94 Meteorology and Atmospheric Sciences; **Q1**)
- [46] Reshef N.^S, Fait A.^{PI}[‡] **Agam N.**^{PI}[‡] 2019. Grape berry position affects the diurnal dynamics of its metabolic profile. *Plant Cell & Environment*, DOI: 10.1111/pce.13522. (19 citations; IF 7.947; 13/238 Plant Sciences; **Q1**)
- [‡] *Shared corresponding authors*
- [47] Kustas W.P.^{PI}, **Agam N.**^{PI}, Alfieri J.G.^C, McKee L.^C, Prueger J.^C, Hipps L.^C, Howard A.M.^T, Heitman J.^C 2019. Below canopy radiation divergence in a vineyard: implications on interrow surface energy balance. *Irrigation Science*, 37, 227-237, DOI: 10.1007/s00271-018-0601-0. (5 citations; IF 2.940; 19/91 Agronomy; **Q1**)
- [48]  Prueger J.H.^{PI}, Parry C.K.^{PD}, Kustas W.P.^C, Alfieri J.G.^C, Alsina M.M.^C, Nieto H.^C, Wilson T.G.^{PD}, Hipps L.E.^C, Anderson M.C.^C, Hatfield J.L.^C, Gao F.^C, McKee L.G.^T, McElrone A.^C, **Agam N.**^C, Los S.A.^S 2019. Crop water stress index of an irrigated vineyard in the Central Valley of California. *Irrigation Science*, 37, 297-313, DOI:10.1007/s00271-018-0598-4. (15 citations; IF 3.519; 19/90 Agronomy; **Q1**. *Listed in the 2019 Most Downloaded Articles in Irrigation Science*)
- [49]  Kustas W.P.^{PI}, **Agam N.**^C, Ortega-Faia S.^C 2019. Forward to the GRAPEX special issue. *Irrigation Science*, 37, 221-226, DOI: 10.1007/s00271-019-00633-7. (7 citations; IF 3.519; 19/90 Agronomy; **Q1**. *Listed in the 2019 Most Downloaded Articles in Irrigation Science*)
- [50] Parry C.K.^{PD}, Nieto H.^{PD}, Guilevic P.^C, **Agam N.**^C, Kustas W.P.^{PI}, Alfieri J.G.^C, McKee L.^T, McElrone A.J.^{PI} 2019. An intercomparison of radiation partitioning models in vineyard canopies. *Irrigation Science*, DOI: 10.1007/s00271-019-00621-x. (9 citations; IF 3.519; 19/90 Agronomy; **Q1**)
- [51] **Agam N.**^{PI}, Kustas W.P.^{PI}, Alfieri J.G.^C, Gao, F.^C, McKee L.M.^T, Prueger, J.H.^C, Hipps, L.E.^C, 2019. Micro-scale spatial variability in soil heat flux (SHF) in a wine-grape vineyard. *Irrigation Science*, DOI:10.1007/s00271-019-00634-6. (11 citations; IF 3.519; 19/90 Agronomy; **Q1**)
- [52] Huryna H.^{PD}, Cohen Y.^C, Karnieli A.^C, Panov N.^T, Kustas W.P.^C, **Agam N.**^{PI} 2019. Evaluation of TsHARP utility for thermal sharpening of Sentinel-3 satellite images using Sentinel-2 visual imagery. *Remote Sensing*, 11, 2304, DOI: 10.3390/rs11192304. (15 citations; IF 5.349; 30/201 Geosciences, Multidisciplinary; **Q1**)
- [53] Kramer I.^S, Berliner P.R.^C, **Agam N.**^{PI} 2020. Modeling the incoming all-wave radiation in a planted trench system. *Agricultural and Forest Meteorology*, 281, DOI: 10.1016/j.agrformet.2019.107834. (IF 6.424; 4/108 Meteorology and Atmospheric Sciences; **Q1**)
- [54]  Fatichi S.^{PI}, Or D.^{PI}, Walko R.^C, Vereecken H.^C, Young M.^C, Ghezzehei T.^C, Hengl T.^C, Kollet S.^C, **Agam N.**^C, Avissar R.^C 2020. Soil structure – an important omission in Earth System Models. *Nature*

- Communications, 11, DOI: 10.1038/s41467-020-14411-z. (62 citations; IF 17.694; 6/73 Multidisciplinary Sciences; **Q1**; *Awarded Highly Cited Paper by ISI, Nov/Dec 2020, Jan/Feb 2021, Mar/Apr 2021: top 1% of its academic field of Geosciences based on a highly cited threshold for the field and publication year*)
- [55] Gashu K.^S, Sikron-Persi N.^T, Drori E.^C, Harcabi E.^C, **Agam N.**^{PI}, Bustan A.^{PI}, Fait A.^{PI} 2020. Temperature shift between vineyards modulates berry phenology and primary metabolism in a varietal collection of wine grapevine. *Frontiers in Plant Science*, 11, 588739. DOI: 10.3389/fpls.2020.588739. (9 citations; IF 6.627; 20/238 Plant Science; **Q1**)
- [56] Kool D.^{PD}, Kustas W.P.^C, Ben-Gal A.^C, **Agam N.**^{PI} 2021. Energy partitioning between plant canopy and soil, performance of the two-source energy balance model in a vineyard. *Agricultural and Forest Meteorology*, 300, DOI: 10.1016/j.agrformet.2021.108328. (2 citations; IF 6.424; 4/108 Meteorology and Atmospheric Sciences; **Q1**)
- [57] Kool D.^{PD}, Agra E.^S, Drabkin A.^S, Duncan R.^S, Fendinat P.P.^S, Leduc S.^S, Lupovitch G.^S, Nambwandja A.N.^S, Ndilenga N.S.^S, Poodiack B.^S, Sagi L.^S, Shmuel Y.^S, Nguyễn Thị T.^S, Maggs-Koling G.^C, Marais E.^C, Pinshow B.^C, Turner J.S.^C, **Agam N.**^{PI} 2021. The overlooked non-rainfall water input sibling of fog and dew: Daily water vapor adsorption on a !Nara hummock in the Namib Sand Sea. *Journal of Hydrology*, 598, 126420, DOI: 10.1016/j.jhydrol.2021.126420. (4 citations; IF 6.708; 9/100 Water Resources; **Q1**)
- [58] Jerszurki D.^{PD}, Saadon T.^S, Zhen G.^S, **Agam N.**^C, Tas E.^C, Rachmilevitch S.^C, Lazarovitch N.^{PI} 2021. Vertical microclimate heterogeneity and dew formation in semi-closed and naturally ventilated greenhouses. *Scientia Horticulturae*, 288, DOI: 10.1016/j.scienta.2021.110271. (2 citations; IF 4.342; 4/36 Horticulture; **Q1**)
- [59] Gashu K.^S, Song C.^S, Dubey A.K.^S, Acuna T.^T, Sagi M.^C, **Agam N.**^{PI}, Bustan A.^{PI}, Fait A.^{PI} 2022. The effect of topo-climate variation on the secondary metabolism of berries in ten white grapevine varieties (*Vitis vinifera*). *Frontiers in Plant Science*, 13, DOI: 10.3389/fpls.2022.847268. (1 citation; IF 6.627; 20/238 Plant Sciences; **Q1**).
- [60] Chen F.^S, Lei F., Knipper K.^C, Gao F.^C, McKee L.^T, Alsina M.^C, Alfieri J.G.^C, Anderson M.C.^C, Alstad K.^C, Dokoozlian N.^C, Greifender F.^C, Kustas W.P.^{PI}, Notarnicola C.^C, **Agam N.**^C, Prueger J.H.^C, Hips L.E.^C, Crow W.T.^{PI} 2022. Application of the Vineyard Data Assimilation (VIDA) system to vineyard root-zone soil moisture monitoring in the California Central Valley. *Irrigation Science*, 40, 779-799, DOI: 10.1007/s00271-022-00789-9. (2 citation; IF 3.519; 19/90 Agronomy; **Q1**)
- [61] Gao R.^S, Torres-Rua F.^{PI}, Aboutalebic M.^C, Nassara A.^C, Whitef W.^C, Alsina M.M.^C, Alfieri J.G.^C, Hips L.^C, Bambach Ortizd N.^C, McElrone A.J.^C, McKee L.G.^T, Prueger J.H.^C, Kustas W.P.^C, Sanchez L.^C, Dokoozlian N.^C, Nieto H.^C, **Agam N.**^C, Gao F.^C, Anderson M.^C, Coopmans K.^C. 2022. LAI estimation across California vineyards using sUAS multi-seasonal multi-spectral, thermal, and elevation information and machine learning. *Irrigation Science*, 40, 731-759, DOI: 10.1007/s00271-022-00776-0. (2 citations; IF 3.519; 19/90 Agronomy; **Q1**)
- [62] Kustas W.P.^{PI}, McElrone A.J.^C, **Agam N.**^C, Knipper K.^C 2022. From vine to vineyard: The GRAPEX multi-scale remote sensing experiment for improving vineyard irrigation management. *Irrigation Science*, 40, 435-444, DOI: 10.1007/s00271-022-00816-9 (IF 3.519; 19/90 Agronomy; **Q1**)
- [63] Gao R.^S, Torres-Rua A.F.^{PI}, Nieto H.^C, Zahn E.^C, Hips L.^C, Kustas W.P.^{PI}, Alsina M.M.^C, Bambach N.^C, Castro S.J.^C, Prueger J.^C, Alfieri J.^C, McKee L.^C, White W.A.^C, Gao F.^C, McElrone A.J.^C, Anderson M.C.^C, Knipper K.^C, Coopmans K.^C, Gowing I.^C, Agam N.^C, Sanchez L.^C, Dokoozlian N.^C ET partitioning assessment using the TSEB model and sUAS information across California Central Valley vineyards. *Remote Sensing*, in press. (IF 5.349; 30/202 Geosciences, multidisciplinary; **Q1**)

Lectures and presentations at meetings and invited seminars not followed by published proceedings
(a) Invited plenary lectures at conferences/meetings

- 2008 Agam N. Diurnal dynamics of the detection of water stress in olive trees by thermal remote sensing. Annual joint meeting of the Israeli Soil Science Society and the Israeli Agricultural Engineering Society. Haifa, Israel.
- 2009 Agam N., Ben-Gal A., Kustas W.P., Cohen Y., Anderson M.C., and Alchanatis V. Thermal remote sensing of crop water status: pros and cons of two different approaches. The Dhalia Greidinger International Symposium: Crop Production in the 21st Century: Global Climate Change, Environmental Risks and Water Scarcity. Haifa, Israel.
- 2016 Agam N., Kool D., Kustas W.P., Ben-Gal A., Lazarovitch N. Evapotranspiration partitioning in an arid vineyard. The 12th Dahlia Greidinger Memorial Symposium themed Water-Soil-Nutrients: Integrated Solutions for Assuring Global Food and Water Security, 29 February-2 March 2016, Haifa, Israel.
- 2018 Agam N., Water content dynamics in a desert soil at the dry end – the contribution of non-rainfall water inputs. New Insights to Tree Hydraulics Meeting, 22-25 January, Weizmann Institute of science, Rehovot, Israel.

(b) Presentation of papers at conferences/meetings (oral or poster)

- 1998 Ninari (Agam) N., Zangvil A. and Berliner P.R. The contribution of dew to the water balance of bare soil in a desert area. First International Conference on Fog and Fog Collection, Vancouver, Canada. 265-268. (Oral presentation).
- 2001 Ninari (Agam) N. and Berliner P.R. The role of dew in the water and heat balance of bare-soil in the Negev desert. Second International Conference on Fog and Fog Collection, St. John's, Canada. 321-324. (Oral presentation).
- 2001 Ninari (Agam) N. and Berliner P.R. The contribution of dew to the water and heat balance of bare soil in a desert area. Workshop on The Role of Dew in the Hydrological Cycle and Ecological Systems of the Negev, Sede-Boker, Israel. (Oral presentation).
- 2002 Ninari (Agam) N. and Berliner P.R. The use of a micro-lysimeter for measuring dew deposition on the soil surface. The Annual meeting of the Israeli Geography Association, Beer-Sheva, Israel. 100. (Oral presentation).
- 2002 Ninari (Agam) N. and Berliner P.R. Nighttime vertical fluxes of latent heat in arid regions. The Annual meeting of the Israeli Geography Association, Beer-Sheva, Israel. (Poster presentation).
- 2003 Agam (Ninari) N., Berliner P.R. and Zangvil A. The role of diurnal soil water content changes in the energy balance of a Loess soil in a desert area. The Annual Meeting of the Israeli Geography Association, Bar-Ilan, Israel. (Poster presentation, *best poster award*).
- 2003 Agam (Ninari) N., and Berliner P.R. Diurnal changes in the water content of a bare Loess soil during the dry season. The Annual Meeting of the Israeli Geography Association, Bar-Ilan, Israel. (Oral presentation).
- 2003 Agam (Ninari) N., Berliner P.R. and Zangvil A. Water absorption by a bare Loess soil in a coastal desert. GLOWA – Jordan River Annual Conference, Kefar-Giladi, Israel. (Poster presentation, full coverage of expenses).
- 2003 Agam (Ninari) N., Berliner P.R. and Zangvil A. The effect of diurnal changes in soil water content on the energy balance. GLOWA – Jordan River Annual Conference, Kefar-Giladi, Israel. (Poster presentation, full coverage of expenses).
- 2003 Ninari (Agam) N. and Berliner P.R. Nighttime water absorption by a bare Loess soil in a coastal desert. Geophysical Research Abstracts, 5, #06249. (Poster presentation).
- 2004 Agam N., and Berliner P.R. Soil Water Adsorption and Evaporation During the Dry Season in an Arid Zone. EOS Transactions AGU, 85(47), Fall Meeting Suppl., Abstract H13D-0455, San-Francisco, California. (Poster presentation).

- 2005 Agam N., Yakir D., Rotenberg E. and Raz-Yaseef N. Soil heat flux and its role in the energy balance of the Yatir forest. Living with Global Change: Challenges in Environmental Sciences, International Conference of the Israel Society of Ecology and Environmental Quality Sciences, Rehovot, Israel. (Poster presentation).
- 2006 Agam N., Kustas W.P., Li F. and Anderson M.C. Aggregation and disaggregation techniques applied on remotely sensed data to obtain optimum resolution for surface energy fluxes estimation. EOS Transactions AGU, 87(36), Joint Assembly Suppl., Abstract H31A-04, Baltimore, Maryland. (Oral presentation).
- 2006 Agam N., Kustas W.P., Anderson M.C. and Li F. Utility and extension of land surface temperature sharpening technique (TsHARP). The 17th Annual BARC Poster Day, Beltsville, Maryland. (Poster presentation).
- 2007 Agam N., Kustas W.P., Anderson M.C. and Li F. Potential errors in the application of thermal-based energy balance models with coarse resolution data. The 18th Annual BARC Poster Day, Beltsville, Maryland. (Poster presentation).
- 2008 Agam N., Kustas W.P., Anderson M.C., and Li F. Enhancing the monitoring of field-scale evapotranspiration by application of a technique for spatial sharpening of thermal imagery. Annual joint meeting of the Israeli Soil Science Society and the Israeli Agricultural Engineering Society. Haifa, Israel. (Oral presentation).
- 2008 Agam N., Ben-Gal A., Cohen Y., Alchanatis V., Yermiyahu U. and Dag A. Evaluation of optimal time-of-day for detecting water stress in olive trees by thermal remote sensing. The second conference on Deserts, Drylands and Desertification. Sede-Boker, Israel. (Oral presentation).
- 2008 Karnieli A. And Agam N. Merits and Limitations in Assessing Droughts by Remote Sensing. The second conference on Deserts, Drylands and Desertification. Sede-Boker, Israel. (Oral presentation).
- 2008 Agam N., Ben-Gal A., Alchanatis V., Cohen Y., Yermiyahu U., Zippori Y., Presnov E., Sprintsin M., and Dag A. Thermal remote sensing for evaluating water stress in irrigated olives. Irrigation Water Management in the Middle East: A workshop for Jordanian-Palestinian-Israeli cooperative research, Antalya, Turkey. (Oral presentation, full coverage of expenses).
- 2009 Agam N., Ben-Gal A., Cohen Y., Alchanatis V., Dag A. Water status monitoring of olive orchards by thermal remote sensing. International Symposium on Olive Irrigation and Oil Quality. Nazareth, Israel. (Oral presentation).
- 2009 Agam N., Evett S.R., Tolk J.A., and W.P. Kustas. Evaporative Loss From the Interrow of Irrigated Crops in a Semi-Arid Agricultural Area. International Annual Meeting of the ASA-CSSA-SSSA: Footprints in the Landscape: Sustainability Through Plant and Soil Science. Pittsburgh, PA, USA. (Oral presentation).
- 2009 Agam N., Ben-Gal A., Cohen Y., and Alchanatis V. Optimal Time-of-Day for Thermal Remote Sensing of Water Stress in Olive Orchards. International Annual Meeting of the ASA-CSSA-SSSA: Footprints in the Landscape: Sustainability Through Plant and Soil Science. Pittsburgh, PA, USA. (Oral presentation).
- 2010 Agam N., Evett S.R., Tolk J.A., Kustas W.P. Contribution of soil evaporation to total evapotranspiration in irrigated fields in a semi-arid region. The 51st Annual Meeting of the Israeli Geography Association. Jerusalem, Israel. (Oral presentation).
- 2010 Agam N., Evett S.R., Tolk L.A., Kustas W.P., Ben-Gal A., Kool D. Effect of Row Orientation on Energy Balance Components in Irrigated Crops in a Semi-Arid Environment. The 3rd International Conference on Drylands, Deserts and Desertification: The Route to Restoration. Sede-Boker, Israel. (Oral presentation).
- 2011 Agam N., Cohen Y., Alchanatis V., Kool D., Ben-Gal A. Diurnal dynamics of crop water stress index of olive trees - what does it really tell us? Dahlia Greidinger International Symposium – AgriSensing 2011. Haifa, Israel. (Oral presentation).

- 2012 Agam N., Kool D., Lazarovitch N., Heitman J.L., Sauer T.J., Ben-Gal A. Soil evaporation in a drip-irrigated vineyard in a desert area. The International Conference on Drylands, Deserts and Desertification. Sede-Boker campus, Israel. (Oral presentation)
- 2012 Kool D., Agam N., Lazarovitch N., Heitman J.L., Sauer T., Ben-Gal. A Below Canopy Evaporation in a Drip-Irrigated Vineyard in Southern Israel. ASA, CSSA, and SSSA Annual meeting, 21-24 October 2012, Cincinnati, USA. (Oral presentation by Kool)
- 2013 Kool D., Agam N., Lazarovitch N., Heitman J.L., Sauer T.J., Ben-Gal A. Below canopy evaporation dynamics: Implementing variable boundary conditions in HYDRUS 2D/3D. International Workshop on Eco-Hydrology of Semiarid Environments - Confronting Mathematical Models with Ecosystem Complexity. 19-22 May 2013, BGU, Israel. (Poster presentation)
- 2013 Kool D., Agam N., Lazarovitch N., Šimůnek J., Heitman J.L., Sauer T.J., and Ben-Gal A. Below canopy evaporation dynamics: Implementing variable boundary conditions in HYDRUS 2D/3D. The Evenari 24th symposium: Automated continuous measurements in agriculture and forestry. 8-12 September 2013, BGU, Israel. (Poster presentation)
- 2013 Moombe M., Agam N. and Lazarovitch N. Estimating surface energy fluxes over bare-soil using HYDRUS-1D. The Evenari 24th symposium: Automated continuous measurements in agriculture and forestry. 8-12 September 2013, BGU, Israel. (Poster presentation)
- 2013 Agam N., Evett S.R., Kustas W.P., Alfieri J.G., Colaizzi P.D. Effect of row orientation on energy balance components. Water, Food, Energy and Innovation for a Sustainable World – ASA-SSSA-CSSA annual meeting. 3-6 November 2013, Tampa, Florida (Oral presentation).
- 2013 Agam N., Berliner P.R. Dimensions and orientation of runoff trenches designed for minimizing water loss. Water, Food, Energy and Innovation for a Sustainable World – ASA-SSSA-CSSA annual meeting. 3-6 November 2013, Tampa, Florida (Poster presentation).
- 2013 Kool D., Agam N., Lazarovitch N., Heitman J.L., Sauer T.J., Šimunek J., Alon Ben-Gal. Below canopy evaporation dynamics: implementing variable boundary conditions in Hydrus 2D/3D. Water, Food, Energy and Innovation for a Sustainable World – ASA-SSSA-CSSA annual meeting. 3-6 November 2013, Tampa, Florida (Oral presentation by PhD student Kool, *best graduate student presentation award*).
- 2013 Colaizzi P.D., Agam N., The Penman-Monteith equation as a method to initialize canopy temperature in the two-source energy balance model and comparison to other methods. Water, Food, Energy and Innovation for a Sustainable World – ASA-SSSA-CSSA annual meeting. 3-6 November 2013, Tampa, Florida (Oral presentation by collaborator Colaizzi).
- 2014 Kool D., Agam N., Lazarovitch N., Heitman J.L., Sauer T.J., and Ben-Gal A. Continuous measurement of soil evaporation in a drip-irrigated wine vineyard in a desert area. ASA-CSSA-SSSA International Annual Meeting, 2-5 November 2014, Longbeach, CA, USA. (Poster presentation)
- 2014 Agam N., Kool D., Lazarovitch N., Heitman J.L., Sauer T.J., Ben-Gal A. Spatial and diurnal below canopy evaporation in a desert vineyard. First Israel-Italy Grapevine Symposium. 29-31 October 2014, Sede-Boqer, Israel (Oral presentations by PhD student Kool, *best graduate student presentation award*).
- 2014 Agam N., Kool D., Ben-Gal A., Lazarovitch N., Heitman J., Sauer T. Spatial below canopy evaporation in a drip irrigated desert vineyard. 2014 Drylands, Deserts and Desertification conference, 17-20 November 2014, Sede-Boqer, Israel. (Oral presentation by PhD student Kool).
- 2015 Agam N., Florentin A. A multi-scale approach to quantifying non-rainfall water inputs. EGU General Assembly 13-17 April 2015, Vienna, Austria. Geophysical Research Abstracts Vol. 17, EGU2015-1433. (Oral presentation)
- 2015 Florentin A., Agam N. Closure of the energy balance equation over bare soil during the formation and evaporation of non-rainfall water inputs. European Geosciences Union General Assembly 13-17 April 2015, Vienna, Austria. Geophysical Research Abstracts Vol. 17, EGU2015-6923. (Poster presentation)

- 2015 Agam N. Partitioning of evapotranspiration in a drip-irrigated wine-grape vineyard in arid areas. Israeli – Hungarian scientific workshop on sustainable agriculture, 26-27 April 2015, Sede-Boqer campus, Israel. (Oral presentation)
- 2016 Walbourn N., Reshef N., Fait A., Agam N. Berry, it's hot outside – Preventing over-exposure of clusters to radiation and high temperatures. The 12th Dahlia Greidinger Memorial Symposium themed Water-Soil-Nutrients: Integrated Solutions for Assuring Global Food and Water Security, 29 February-2 March 2016, Haifa, Israel. (Poster presentation)
- 2016 Walbourn N., Reshef N., Fait A., Agam N. Can we help these berries in the desert? Preventing over-exposure of clusters to radiation and high temperatures. Sustainable Grape and Wine Production in the Context of Climate Change – ClimWine. 10 April-13 April, Bordeaux, France. (Poster presentation)
- 2016 Kool D., Agam N., Lazarovitch N., Heitman J.L., Sauer T., Ben-Gal A. Evaluation of heat-pulse sensor to measure evaporation in a desert vineyard. SSSA Kirkham Conference themed The Root Zone: Soil Physics and Beyond, 10-14 April 2016, Sede Boqer campus, Israel. (Poster presentation)
- 2016 Kool D., Kustas W.P., Agam N. Application of the two-source energy balance model to partition evapotranspiration in an arid wine vineyard. European Geosciences Union General Assembly, 17-22 April, Vienna, Austria. (Oral presentation by postdoc Kool)
- 2016 Carmi G., Leake S., Berliner P.R., Agam N. The efficiency of trenches as runoff water harvesting systems and the role of their design in minimizing water losses. European Geosciences Union General Assembly, 17-22 April, Vienna, Austria. (Oral presentation by collaborator Berliner)
- 2016 Walbourn N., Reshef N., Fait A., Agam N. Berry, it's hot outside. Manipulating cluster microclimate to improve yield homogeneity. X International Symposium on Grapevine Physiology and Biotechnology. 13 June-18 June, Verona, Italy. (Poster presentation by MSc student Walbourn, *best poster award*)
- 2016 Reshef N. Manipulating cluster-zone light properties to improve wine quality X International Symposium on Grapevine Physiology and Biotechnology. 13 June-18 June, Verona, Italy. (Oral presentation by PhD student Reshef)
- 2016 Jiang A., Berliner P.R., Agam N. Effect of soil type and surface layer on non-rainfall water inputs. 7th International Conference on Fog, Fog Collection and Dew, 24-29 July 2016, Wrocław, Poland. (Poster presentation by MSc student Jiang)
- 2016 Florentin A., Agam N. Non-rainfall water inputs derive latent heat flux over dry bare soil. 7th International Conference on Fog, Fog Collection and Dew, 24-29 July 2016, Wrocław, Poland. (Poster presentation, *prize for scientific originality*)
- 2016 Kustas W.P., Nieto H., Kool D., Torres-Rua A., Alarab M., Gao F., Prueger J.H., Anderson M.C., Alfieri J.G., Agam N. Song L. Estimating ET partitioning using a thermal-based Two-Source Energy Balance model with high resolution airborne imagery. Resilience Emerging from Scarcity and Abundance, ASA-CSSA-SSSA annual meeting, 6-9 November 2016, Phoenix, AZ, USA. (Oral presentation by collaborator Kustas)
- 2016 Berliner P.R., Carmi G., Leake S., Agam N. The efficiency of trenches as runoff water harvesting systems and the role of their design in minimizing water losses. Resilience Emerging from Scarcity and Abundance, ASA-CSSA-SSSA annual meeting, 6-9 November 2016, Phoenix, AZ, USA. (Oral presentation)
- 2016 Kool D., Kustas W.P., Ben-Gal A., Agam N. Energy and ET Partitioning in a Drip-Irrigated Vineyard Subject to Local and within-Field Advection. Resilience Emerging from Scarcity and Abundance, ASA-CSSA-SSSA annual meeting, 6-9 November 2016, Phoenix, AZ, USA. (Oral presentation by postdoc Kool)
- 2016 Agam N., Kool D., Kustas W.P. How Well Does the Two-Source Energy Balance Model Partition ET in a Drip-Irrigated Vineyard? Resilience Emerging from Scarcity and Abundance, ASA-CSSA-SSSA annual meeting, 6-9 November 2016, Phoenix, AZ, USA. (Oral presentation)
- 2017 Kool D., Ben-Gal A., Agam N. Within-field advection enhances evaporation and transpiration in a vineyard in an arid environment. European Geophysical Union General Assembly, 23-28 April,

- 2017, Vienna, Austria. Geophysical Research Abstracts, Vol. 19, EGU2017-7931. (Oral presentation by Agam)
- 2017 Agam N., Berliner P.R., Jiang A. Soil and surface layer type affect non-rainfall water inputs. European Geophysical Union General Assembly, 23-28 April, 2017, Vienna, Austria. Geophysical Research Abstracts, Vol. 19, EGU2017-12188. (Poster presentation)
- 2017 Berliner P., Leake S., Carmi G., Agam N. Improving the water use efficiency of olive trees growing in water harvesting systems. European Geophysical Union General Assembly, 23-28 April, 2017, Vienna, Austria. Geophysical Research Abstracts, Vol. 19, EGU2017-11918. (Poster presentation)
- 2017 Kramer I., Agam N., Berliner P.R. Modeling the radiation balance within a planted trench system. European Geophysical Union General Assembly, 23-28 April, 2017, Vienna, Austria. Geophysical Research Abstracts, Vol. 19, EGU2017-12085. (Oral presentation by MSc Kramer).
- 2017 Huryna H., Cohen Y., Karneli A., Kustas W.P., Torres-Rue A., Agam A. Sharpening land surface temperature over vineyards using Sentinel platforms. Drylands, Desert, and Desertification 2017 conference, 6-9 November 2017, Sede Boqer campus, Israel. (Poster presentation by postdoc Huryna).
- 2017 Florentin A., Agam N. Non-rainfall water inputs derive latent heat flux over dry bare soil. Drylands, Desert, and Desertification 2017 conference, 6-9 November 2017, Sede Boqer campus, Israel. (Poster presentation by PhD Florentin).
- 2017 Kramer I., Berliner P.R., Agam N. Modeling the radiation balance within a planted trench system. Drylands, Desert, and Desertification 2017 conference, 6-9 November 2017, Sede Boqer campus, Israel. (Poster presentation by MSc Kramer).
- 2017 Westram M., Reshef N., Fait A., Agam N. Sunlight modulation helps mitigating sunburn in white grapes. Drylands, Desert, and Desertification 2017 conference, 6-9 November 2017, Sede Boqer campus, Israel. (Poster presentation by MSc Westram).
- 2018 Huryna H., Cohen Y., Panov N., Karnieli A., Agam N. 2018. Thermal sharpening of Sentinel3 for water status mapping in large grapevines. 14th International Conference on Precision Agriculture, 24-27 June 2018, Seattle, WA, USA (Oral presentation by collaborator Cohen).
- 2018 Huryna H., Cohen Y., Karnieli A., Panov N., Kustas W.P., Agam N. Predicting daily land surface temperature at high spatial resolution by fusing Sentinel-3 and Sentinel-2 data. AGU Fall Meeting, 10-14 December 2018, Washington DC, USA (Poster presentation).
- 2018 Florentin A., Jiang A., Berliner P.R., Agam N. The effect of soil type and crust cover on non-rainfall water inputs – laboratory and field experiments revealing contradicting results. AGU Fall Meeting, 10-14 December 2018, Washington DC, USA (Poster presentation by PhD Florentin).
- 2018 Levi Y., Agam N. Row orientation affects the momentum flux in wine grapevines. AGU Fall Meeting, 10-14 December 2018, Washington DC, USA (Poster presentation by MSc Levi).
- 2019 Agam N., Kustas W.P., Alfieri J.G., McKee L.G., Prueger J.H., Heitman J.L., Howard A.M., Hipps L.E. Below canopy radiation divergence in a vineyard – implications on inter-row surface energy balance. The 13th Dahlia Greidinger International Symposium: Sustainable Primary Food Production Emphasizing Soil-Water and Environmental Conservation, 4-6 March 2019, Haifa, Israel (Oral presentation).
- 2019 Levi Y. and Agam N. Row orientation affects the momentum flux in wine grapevines. The 13th Dahlia Greidinger International Symposium: Sustainable Primary Food Production Emphasizing Soil-Water and Environmental Conservation, 4-6 March 2019, Haifa, Israel (Poster presentation).
- 2019 Berliner P.R., Jiang A., Neuberger C., Florentin A., Agam N. The effect of soil type and crust cover on the absorption of atmospheric water vapor – laboratory and field trials. 8th International Conference on Fog, Fog Collection and Dew, 14-19 July 2019, Taipei, Taiwan (Oral presentation by collaborator Berliner).
- 2020 Agam N., Kool D. Prospective upscaling of quantification of non-rainfall water inputs to regional scale. EGU General Assembly 2020 online, 4-8 May 2020, EGU2020-12486. **Solicited presentation.**



- 2020 Berliner P.R., Jiang A., Neuberger C., Agam N. The effect of soil type and crust cover on the absorption of atmospheric water vapor – laboratory and field trials. EGU General Assembly 2020 online, 4-8 May 2020, EGU2020-5136.
- 2020 Alsina M., Knipper K., Anderson M., Kustas W.P., Bambach N., McKee L., Alfieri J., O'Donnel J., Parsons J., McCarthy B., Hipps L., McElrone A., Gao F., Torres A., Agam A., Sanchez L., Dokoozlian N., Prueger J. Using a Remote Sensing data-based toolkit to monitor vine water use and water status for real time irrigation scheduling in California vineyards. EGU General Assembly 2020 online, 4-8 May 2020, EGU2020-22248.
- 2021 Agam N., Kool D. Water where there is no water – Atmospheric water captured by world deserts. OzFlux 2021, Australian and Newzeland Flux Research and Monitoring. 1-2 November 2021, online.
- 2021 Kool, D., Agam, N. Water where there is no water – Atmospheric water captured by world deserts. – ASA, CSSA, and SSSA Annual Meeting, 7-10 November, Salt Lake City, UT, USA. Poster presentation.
- 2021 Agam N., Kool D. Water where there is no water – Atmospheric water captured by world deserts. 1st OZCAR TERENO international conference: Advancing critical zone science, 4-8 October 2021, Strasbourg, France. Poster presentation.
- 2021 Alfieri J., Kustas W., Prueger J., Agam N., Hipps L., Bambach N., McKee L. Spatial Variability of Inter-row and Sub-canopy Measurements of Incident Solar Radiation within Vineyards. Earth and Space Science Open Archive, AGU Fall Meeting, New Orleans and Online Everywhere. 13-17 December 2021.
- 2022 Agam N., Kool D. Water where there is no water – Atmospheric water captured by world deserts. EGU General Assembly, 23–27 May 2022, Vienna, Austria, DOI: 10.5194/egusphere-egu22-12343, 2022.
- 2022 Berliner P., Neuberger C., Jiang A., Agam N. The effect of soil type and crust cover on the absorption of atmospheric water vapor – laboratory and field trials. EGU General Assembly 23–27 May 2022, Vienna, Austria, DOI: 10.5194/egusphere-egu22-11198, 2022.
- 2022 Kool D., Agam N. Novel methods to detect non-rainfall water inputs in desert soils. Kirkham Conference, 18 August- 2 September 2022, Kruger National Park, South Africa. (Oral presentation by Kool, invited).

(c) Presentations at informal international seminars and workshops

- 2015 GRAPEX workshop, Measuring soil water evaporation using micro-Bowen ratio systems, 17-20 March, Utah State University, 2015, Utah, USA
- 2017 GRAPEX workshop, Spatial distribution of solar radiation below vine-canopy and corresponding soil heat flux distribution, 7-9 February 2017, Utah State University, Utah, USA
- 2018 GRAPEX workshop, Spatial variability in Soil heat flux from a detailed SHF array, 3-10 March 2018, Modesto, California, USA

(d) Seminar presentations at universities and institutions

- 2004 Environmental Sciences & Energy Research dept., Weizmann Institute of Science, Rehovot, Israel, Soil-atmosphere water vapor exchange during the dry season in the Negev
- 2004 Department of Geography and Environmental Development, BGU, Beer-Sheva, Israel, Diurnal water vapor exchange between soil and atmosphere during the dry season in the Negev
- 2004 Joint seminar of the Department of Ecology and the Department of Solar Energy and Environmental Physics, Jacob Blaustein Institute for Desert Research, BGU, Sede-Boker campus, Israel, Diurnal water vapor exchange between soil and atmosphere during the dry season in the Negev
- 2006 Department of Soil and Water Sciences, The Hebrew University, Rehovot, Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models

- 2006 Department of Geography and Environmental Development, BGU, Beer-Sheva, Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2006 Institute of Agricultural Engineering, The Agricultural Research Organization of Israel, Beit-Dagan, Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2006 Geological Survey of Israel, Jerusalem, Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2006 Joint seminar of the Department of Environmental Hydrology & Microbiology, Wyler Department of Dryland Agriculture, and the Albert Katz Department of Dryland Biotechnologies, BIDR, BGU, Sede-Boker campus, Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2006 Invited seminar of the College of Agriculture, New Mexico State University, Las Cruces, New-Mexico, USA, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2008 Gilat research center, The Agricultural Research Organization of Israel, High-spatial high-temporal evapotranspiration computation using remote sensing data and energy balance models
- 2011 Department of Soil and Water Sciences, The Hebrew University, Rehovot, Israel, Effect of agricultural systems orientation on energy balance components
- 2012 French Associates Institute for Agriculture and Biotechnology of Drylands, BIDR, BGU, Sede-Boker campus, Israel, Effect of agricultural systems orientation on energy balance components
- 2013 Hydrology and Remote Sensing Laboratory, Agricultural Research Services, US Department of Agriculture, Beltsville, MD, USA, Effect of agricultural systems orientation on energy balance components
- 2013 The Institute of Soil, Water and Environmental Sciences, The Agricultural Research Organization of Israel, Volcani Center, Beit-Dagan, Israel, Effect of agricultural systems orientation on energy balance components
- 2014 Hydraulic Engineering Unit, University of Córdoba, Córdoba, Spain, Effect of agricultural systems orientation on energy balance components
- 2015 Earth Sciences Institute, The Hebrew University of Jerusalem, Israel, Effect of agricultural systems orientation on energy balance components
- 2015 Plant, Soil & Climate department, Utah State University, Utah, USA, A multi-scale approach to quantifying non-rainfall water inputs
- 2016 Geography Department, Hebrew University, Jerusalem, Israel, Effect of agricultural systems orientation on energy balance components
- 2016 Department of Geography and Environmental Development, Ben-Gurion University of the Negev, Beer-Sheva, Israel, Effect of agricultural systems orientation on energy balance components
- 2018 Landscape Ecology & Ecosystem Science Department, Michigan State University, East Lansing, Michigan, USA, How likely is it for dew to form on a desert soil?

Research grants

- 2009 **BARD grant** (US-4262-09)
Joshua L. Heitman (PI), Nurit Agam, Alon Ben-Gal, Thomas J. Sauer, John Havlin. Separating Components of Evapotranspiration to Improve Efficiency in Vineyard Water Management.
Annual amount: \$106,600; 3 years; Total grant \$320,000.
- 2014 **Koshland Foundation**
Aaron Fait (PI), Nurit Agam (PI). Zooming in on desert viticulture: manipulating bunch microclimate to enhance grape quality in arid environments.
Annual amount: \$17,500; 2 year; Total grant \$35,000.

- 2015 **The Frances and Elias Margolin Trust**
Nurit Agam (PI), Aaron Fait (PI). Manipulating bunch microclimate to enhance grape quality in arid environments.
Annual amount: \$25,000; 1 year; Total grant \$25,000.
- 2015 **Ministry of Agriculture & Rural Development, Leveraging agricultural R&D**
Shimon Rachmilevich (PI) et al. Studying the Root zone in drylands for advancing agriculture.
Total grant \$3,000,000/3 years.
My share: Annual amount: \$33,300; 3 year; Total grant: \$100,000.
- 2015 **Ministry of Agriculture & Rural Development, Leveraging agricultural R&D**
Victor Elchanatis (PI) et al. Precision agriculture – fertigation.
Total grant: \$3,000,000/3 years.
My share: Annual amount: \$46,600; 3 year; Total grant: \$140,000
- 2016 **Israel Science Foundation (ISF) – Individual Research Grant (481/16)**
Nurit Agam (PI). A multi-scale approach to quantifying non-rainfall water inputs.
Annual amount: \$65,500/4 years; Total grant: \$262,000
- 2016 **Israel Science Foundation – New-Faculty Equipment Grant (2084/16)**
Nurit Agam (PI)
Total grant: \$267,000
- 2017 **Bona Terra Foundation**
Aaron Fait (PI), Nurit Agam (PI). Evaluating the fitness of newly introduced grapevine varieties into the Negev highland for a diversified high quality regional wine production
Total grant: CHF50,000; 2 years; My share: CHF20,000; 2 years
- 2017 **Jewish National Fund**
Nurit Agam (PI), Moshe Shachak. Monitoring water and energy fluxes across the climatic gradient of LTER stations in the Negev
Total grant: \$135,000; 3 years
- 2018 **Ministry of Science and Technology (0341-7021)**
Eyal Ben-Dor (PI) et al. Developing environmental applications using hyperspectral thermal infrared technology.
Total grant: \$300,000; 3 years; My share: \$50,000
- 2019 **BMBF & Ministry of Science and Technology (20-12-0030)**
Nurit Agam (PI), Martin Schrön, Steffen Zacharias. Assessing the potential of Cosmic-Ray Neutron Sensing (CRNS) for quantifying Non-Rainfall Water Inputs. (20-12-0030)
My share: \$140,000; 3 years
- 2019 **BGU-NU-UofC collaborative research**
Neelesh A. Patankar (PI), Nurit Agam (PI), Kyoo-Chul (Kenneth) Park, Naftali Lazarovitch, Stuart J. Rowan, Chong Liu. Improving water use efficiency with multifunctional surfaces.
Total grant: \$90,000; 2 years; My share: \$30,000
- 2020 **Koshland Foundation**
Nurit Agam (PI), Merav Seifan (PI). Does the Rose of Jericho harvest dew and/or fog?
Annual amount: \$20,000; 2 year; Total grant \$40,000.
- 2021 **Israel Science Foundation (ISF) – Individual Research Grant (2381/21)**
Nurit Agam (PI). Atmospheric-water capture by the world's desert soils.
Annual amount: \$83,000; 5 years; total grant: \$415,000.

2022 Food Security Merit grant

Supported by the Moshe Mirilashvili Center for Food Security in the Desert
Nurit Agam (PI), Dilia Kool (PI). Atmospheric water harvesting – opportunities in deserts.
Annual amount: \$20,000; 2 year; Total grant \$40,000.

2022 Binational Agricultural Research and Development Fund (BARD US-5548-22R)

Joseph Alfieri (PI), Nurit Agam (Co-PI), William P. Kustas, Alfonso Torres-Rua, Arnon Karnieli, Andrew McElrone. Remote-sensing of wine-grapevine transpiration for improving vine water status.
Total grant: \$310,000; 3 years; My share: \$100,000.

Additional information

Participation in international large-scale field experiments

For almost 15 years now I am a part of a large group of scientists from various research institutions in the US and worldwide, led by Dr. William P. Kustas of the US Department of Agriculture, Agricultural Research Services, conducting multidisciplinary large-scale field experiments in the US. My role in these experiments and this group has gradually expanded, and I am today an integral part of its core. The exposure to state-of-the-art scientific methodologies and numerous highly-ranked scientists has been a valuable contribution to my scientific career. Below is a description of the field experiments I took (and am taking) part in, and my role in each of them.

CLASIC, Oklahoma, 2007

Cloud and Land Surface Interaction Campaign (CLASIC)

A cross-disciplinary interagency research effort aimed to advance the understanding of how land surface processes influence cumulus convection and address significant uncertainties associated with the water cycle, through a study that comprehensively addresses the water budget within a limited spatial and temporal domain. CLASIC was conducted at the ACRF Southern Great Plains field measurement site in Oklahoma, during the summer of 2007.

My role: Participation in the design and the field measurements of soil heat flux at two (out of 12) flux towers.

BEAREX08, Texas, 2008

Bushland Evapotranspiration and Agricultural Remote sensing EXperiment 2008 (BEAREX08)

Scientists from seven federal and state institutions worked together to investigate temporal and spatial variations of the surface energy balance in a semi-arid irrigated and dryland agricultural region of the Southern High Plains in the Texas Panhandle. BEAREX08 was conducted during the summer of 2008 at the USDA-ARS Conservation & Production Research Laboratory near Bushland, Texas.

My role: Co-lead of the design, field measurements, and analysis of (1) partitioning evapotranspiration into evaporation and transpiration; (2) soil heat flux spatial variability across the interrow.

I am the first author of two papers in a special issue summarizing this experiment [publications [#16](#) and [#17](#)]. I am also co-author of 4 additional papers in the special issue [[#18-21](#)], one of which was among the 10 top cited papers published in Advances in Water Resources in 2012/2013 [[#19](#)].

GRAPEX, California, 2013-present

Grape Remote sensing Atmospheric Profiling & Evapotranspiration eXperiment (GRAPEX)

The prime aim of this ongoing interagency research is to better understand the water and energy partitioning regimes in wine-grape vineyards over a climatic gradient in California, and to develop multi-scale monitoring protocols that will increase yield quality and water use efficiency.

My role: Lead of the design, field measurements, and analysis of (1) below canopy radiation regime; (2) soil heat flux variability; (3) separating evaporation and transpiration; and (4) sensible heat advection into the vineyard. I was one of the co-editors of a special issue summarizing the results of this project, published in 2019 in the **Q1** Journal *Irrigation Science*. I authored and co-authored 5 papers [[#47-51](#)] therein, two of which were listed in the 2019 Most Downloaded Articles in *Irrigation Science*. I coauthored 3 additional papers [[#60-62](#)] that were published in a second special issue I co-edited, published in 2022 in *Irrigation Science*.