

CV Liora Shaltiel-Harpaz

12.2020

A. Personal Details

- Date of birth: 24/8/64
- Country of birth: USA
- Date of immigration to Israel: 24/9/64
- Citizenship: Israeli, American and German
- Identity number: 069257558
- Family status: Married+2
- Permanent Address: 6 Harchava Alef, Rosh-Pina, 1200000
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B. Higher Education

1988-1992	B.Sc. (summa cum laude), Biology, University of Haifa, Haifa, Israel.
1992-1994	M.Sc. (Cum Laude) Life Sciences with specialization in Ecology, Ben-Gurion University of the Negev, Beer-Sheva, Israel. Title of thesis: Honeydew as a cue in patch evaluation by a parasitic wasp <i>Diaeretiella rapae</i> foraging for its aphid host <i>Brevicoryne brassicae</i> . The work was carried out under the supervision of Dr. Yoram Ayal.
1997-2002	Ph.D. in Eco-entomology in the Department of Entomology, Faculty of Agricultural, Food and Environmental Quality Sciences, Hebrew University of Jerusalem, Rehovot, Israel. Title of thesis: The spatial dynamics of the omnivorous Heteroptera <i>Anthocoris nemoralis</i> : Effects of host plants and prey. The work was carried out under the supervision of Prof. Boaz Yoal and Prof. Moshe Coll

C. Academic positions in academic institutions

2005-2007	Adjunct teacher at Tel-Hai College
2008-present	Lecturer and senior faculty member at Tel-Hai College
2012-2014	Head of Ecology Unit, Department of Environmental Science, Tel-Hai College

D. Positions in research Institutions

2006-present	Researcher at MIGAL Northern R&D Plant Protection Unit (promoted to senior researcher in 2018)
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E. Research Grants

Concluded

1996-1997	"Integrated pest management of <i>Edwardsiana rosae</i> in pome orchards using the egg parasitoid <i>Anagrus atomus</i> ." Fruit Board of Israel. PI . Budget: Total \$10,000;
1998-2001	"IPM of Pear Psylla in Israel." ICSFA (Israel Chief Scientist Foundation of the Ministry of Agriculture). PI . Budget: Total \$112,500; Researchers' part: \$112,500
2004-2006	"Development of integrated management control of Thrips in chives." ICSFA . PI . Total \$37,500; Researchers' part: \$20,500
2006-2009	"The impact of pear tree nitrogen fertilization and growth regulation on the pear psylla, <i>Cacopsylla bidens</i> (Sulc)." Israeli Fruit Growers' Association, National Psylla Project. PI . Total: \$78,000; Researchers' part: \$78,000.
2006-2007	"Planting <i>Rhamnus alaternus</i> hedgerows to conserve <i>Anthocoris nemoralis</i> , a natural enemy of the pear psylla, <i>Cacopsylla bidens</i> (Sulc)." Israeli Fruit

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	Growers' Association, National Psylla Project. PI. Total \$30,000; Researchers' part: \$30,000.
2006-2008	"Control of <i>Euborellia Annulipis</i> in ground nuts fields in the Hula valley." Israeli Ground Nut Growers Association. PI. Total: \$30,000; Researchers' part: \$30,000.
2006-2007	"IPM project in the Hula valley." Israel Ministry of Agriculture. PI. Total: \$60,000; Researchers part: \$60,000.
2007-2009	"Localization of potential trap plants for organic crop pests- <i>Aphis gossypii</i> Golver as a model pest." ICSFA. PI. Total: \$90,000; Researchers' part: \$30,000..
2009-2011	"Alternative means to control the pear psylla <i>Cacopsylla bidens</i> (Sulc)." ICSFA. PI. Total: \$105,000; Researchers' part: \$85,500.
2009-2011	"The mechanisms underlying the population breakout of the pink bollworm in cotton and the development of integrated new approaches for its control.." ICSFA. Total: \$156,000; Researchers' part: \$91,500
2010	"Biofumigation as a mean to produce pest free herbs." ICSFA. PI. Total: \$24, 000; Researchers' part: \$24,000.
2010-2011	"IPM of <i>Tuta absoluta</i> in open field tomato crops." Israeli Vegetable Board. PI. Total: \$20,000; Researchers' part: \$20,000.
2010-2012	"Biofumigation and seedlings pre planting treatments as means to produce pest free vegetables in a reduced pesticides management." ICSFA. PI. Total \$84,000; Researchers' part: \$84,000.
2011-2013	"Improving cotton profitability using a multi-disciplinary approach." ICSFA. PI. Total: \$270,000; Researchers' part: \$15,500.
2012-2014	"Development of decision-making tools for IPM of <i>Tuta absoluta</i> in open field tomatoes." ICSFA. PI. Total: \$130,000; Researchers' part \$105,000.
2013-2014	"Reduction of <i>Rhizoglyphus robini</i> damage to onion and garlic by implementing compost for the suppression of <i>Fusarium oxysporum</i> ." Shaham Fund, Israel Ministry of Agriculture. PI. Total: \$6,000 ;Researchers' part: \$6,000.
2013-2015	"Control of <i>Pistia stratiotes</i> In Israel - Study of local natural enemies." JNF (Jewish National Fund). PI. Total: \$54,500; Researchers' part: \$54,500.
2013-2016	"The use of resistant pear trees in order to control pear psylla." ICSFA. Total :\$102,000; Researchers' part: \$69,000.
2013-2016	"Development of economic injury level of cereal aphids in wheat to prevent crop damage." Shaham Fund of the Israel Ministry of Agriculture. PI. Total: \$18,000; Researchers' part \$18,000.
2014-2016	"Monitoring biodiversity in agricultural ecosystems: Field crops " ICSFA. PI. Total: \$135, 000; Researchers' part: \$42,000
2015-2016	"Understanding the relationship between volatiles of figs fertilized by <i>Blastophaga psenes</i> and of <i>Silba adipata</i> Mac Alphine in order to reduce damage to figs." Fruit Board of Israel, Fig Growers' Table. PI. Total \$26,000; Researchers' part \$26,000.
2015-2017	"Suppression of the soil borne pathogen <i>Fusarium oxysporum</i> and mite <i>Rhizoglyphus robini</i> in onion and garlic using environmentally friendly measures." ICSFA. PI. Total: \$120,000; Researchers' part: \$39,000.
2015-2018	"Processing of agricultural plant waste, using the black soldier fly, for receiving compost and protein-rich animal feed." ICSFA. Total \$240,000; Researchers' part: \$62,000.
2017	"Development of carrot psyllid-attractant to reduce Yellows disease." ICA-Migal Accelerator for Preliminary Research Fund. Total: \$20, 000; Researchers' part: \$15,000.

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2018	"Developing an environmentally friendly IPM program to control truffles soil pests." Migal Accelerator for Preliminary Research Fund. PI . Total: \$15, 000; Researchers' part: \$15,000.
2017-2019	"Studying the interaction between plant nutrition and pests for the reduction of pesticide use and optimization of fertilizer application." ICSFA. PI . Total: \$302,520; Researchers' part: \$210,000.
Current	
2019-2020	"Treatment of the outbreaks of the mango soft scale <i>Milviscutulus mangiferae</i> by the parasitic wasp <i>Microterys nietneri</i> ." Mango Grower's Board. PI . Total: 16,000\$; Researchers' part: \$10,000.
2019	"Promoting the prevention and control of three scale insects- pest species of avocado, with an emphasis on the papaya mealybug." Avocado Growers' Board. PI . Total: \$18,000; Researchers' part: \$10,000.
2019-2021	"Development of protocols for alternative protein production, to feed men and fish, based on <i>Hermita illulense</i> the Black Soldier Fly larvae, fed on agricultural wastes of the Upper Galilee." ICSFA. PI . Total \$213,000; Researchers' part: \$46,500.
2019-2021	"Clay mineral based formulations for slow release of East Indian lemongrass essential oil, aiming thrips control in chives." ICSFA. Total: \$213,000; Researchers' part: \$46,500.
2019-2021	"Developing a modeling tool for predicting the dynamics, under global warming, of whitefly pests in open field vegetable crops, and building a reliable tool for risk assessment and decision making." ICSFA. Total \$234,000; Researchers' part: \$51,000.
2019-2021	"Sensitivity analysis of different carrot strains to the carrot psylla and to the Yellows disease to improve IPM in carrots." ICSFA. Budget: Total \$225,000; Researchers part \$45,000.
2019-2021	"Development of a system for locating hot spots of Mediterranean flies in apple orchards for more accurate pest control." ICSFA. Total: \$234,000; Researchers' part: \$18,000.
2019-2021	"Using resistant almond varieties to the almond seed wasp in order to understand resistance mechanism and improvement of almond varieties resistant to the wasp." ICSFA. Total: \$234,000; Researchers' part: \$15,000.
2019-2022	"Preventing HLB epidemics for ensuring citrus survival in Europe." European Commission Horizon 2020. Total: €6,639,815; Researchers' part €65,875.
2020-2022	"Promoting the prevention and control of the coccid scale pests in avocado on the background of ecological and management changes in the industry." ICSFA. PI . Total: \$225,828; Researchers' part: \$200,000.
2020-2021	"New chitinase-based Products for the control of insect pests" . Italy-Israel R&D Cooperation Program Authority of innovation. Total: €57,500 researchers part €28,750. Collaborators: Moran Siti, Luxemburg Industries Ltd , Israel. Riccardo Liguori Isagro SpA, Italy. Gianluca Tettamanti , Insubria Uni. Italy.
2020-2021	"Management of the carrots psylla using the "push-pull" method to reduce yellowing disease damage in commercial carrot". The Carrot growers table - Vegetable Council. Total: 20000 \$
2020-2021	"Development of Black Fig fly-attractant and or repellent to reduce Fig fruit damages". ICA foundation. (PI) Total 35000\$

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2021-2023	Improving stream-agriculture interface and enhancing ecosystem services using a riparian vegetation buffer strip: the Nahalal stream as a model ICSFA. 214000\$.reseracher pear 15000\$
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F. Publications

1. a. Articles in refereed journals

1. **Shaltiel, L. and Ayal, Y. (1998).** The use of kairomones for foraging decisions at two hierarchical scales by an aphid parasitoid: Foraging in small host aggregations. *Ecological Entomology* 23:319-329. IF 2.073; Entomology Rank: 20/98, **Q1**. Citations: 67
2. **Shaltiel, L. and Coll, M. (2004).** Reduction of pear psylla damage by *Anthocoris nemoralis*: The importance of orchard colonization time and neighboring vegetation. *Biocontrol Science and Technology* 8:811-821. IF 1.00; Entomology Rank: 52/98, **Q3**. Citations: 37
3. Ne'eman, G., Shavit, O., Shmida, A. and **Shaltiel, L. (2006).** Foraging by male and female solitary bees with implications for pollination. *Journal of Insect Behavior* 19:383-401. IF 0.931; Agricultural and Biological Sciences Rank: 70/139, **Q2**. Citations: 45
4. ***Shaltiel-Harpaz, L., Kedoshim, R., Openhiem, D., Stern, R. and Coll, M. (2010).** Effect of host plant makeup through nitrogen fertilization and growth regulators on the pear psylla population. *Israel Journal of Plant Sciences* 58:143-148. IF 0.908; Plant science Rank :76/197, **Q2**. Citations: 6
5. ***Gophen M. and Shaltiel L. (2012).** Record of the alien species *Craspedacusta sowerbii* Lankester, 1880 (Cnidaria: Limnomedusae) *BioInvasions Records* 1: 29-31. IF 1.189, Environmental Science Rank: 137/336, **Q2**. Citations:5
6. ***Zappalà, L., Biondi, A., Chailleux, A., Shaltiel-Harpaz, L., Gerling, D., Stavrinides, M., Madadi, H., Guenaoui, Y., Chermiti, B., El Arnaouty, A., Al-Jboory, I. J., Bayram, A., Alma, A., Desneux, N. (2013).** Western Palaearctic natural enemies of the Neotropical moth, *Tuta absoluta*, and their potential for use in pest control strategies. *Journal of Pest Science*, 86(4), 635-647. IF 5.133. Agricultural and Biological Sciences Rank: 5/320, **Q1**. Citations:185
7. ***Shaltiel-Harpaz, L., Holand, D., Soroker, V., Kedoshim, R., Hason, R., Sokalsky, T., Hatib, C., Bar Ya'akov, I. (2014).** Two pear varieties evaluated for resistance to pear psylla (*Cacopsylla bidens* (Sulc)) in Israel. *Pest Management Science* 70 (2), 234-239. IF 3.255. Agricultural and Biological Sciences Rank: 7/139, **Q1**. Citations:11
8. ***Rozenberg, T., Shaltiel-Harpaz, L., & Coll, M. (2015).** Visualizing eggs of *Nesidiocoris tenuis* (Heteroptera: Miridae) embedded in tomato plant tissues. *Entomological Science* 18(3) 400-402. IF 1.073. Entomology, Rank: 51/98, **Q3**. Citations:1
9. ***Shaltiel-Harpaz, L., Gerling, D., Graph, S., Kedoshim, H., Azolay, L., Rozenberg, T., Nachache, Y., Steinberg, S., Allouche, A. (2016).** Control of the Tomato Leafminer, *Tuta absoluta* (Lepidoptera: Gelechiidae) in Open-Field Tomatoes by Indigenous Natural Enemies Occurring in Israel. *Journal of Economic Entomology* 109.1 120-131. IF 1.936 Agricultural and Biological Sciences Rank 29/139, **Q1**. Citations: 11
10. *** Shaltiel-Harpaz, L., Gerchman, Y., Ibdah, M., Kedoshim, R., Rachmany, D., Hatib, C., Bar Ya'akov, I., Soroker, V., Holand, D. (2018).** Grafting on resistant interstocks reduces scion susceptibility to pear psylla, *Cacopsylla bidens*. *Pest Management Science* 74(3), 617-626. IF 3.255 Agricultural and Biological Sciences Rank: 7/139, **Q1**. Citations: 1

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11. *Han, P., Bayram, Y., **Shaltiel-Harpaz, L.**, Sohrabi, F., Saji, A., Esenali, U. T., Lu, Z. Z. (2019). *Tuta absoluta* continues to disperse in Asia: damage, ongoing management and future challenges. *Journal of Pest Science*, 1-11. IF 5.133. Agricultural and Biological Sciences Rank: 5/320, **Q1**, Citations:25
12. * Yahyaa, M., Rachmany, D., **Shaltiel-Harpaz, L.**, Nawade, B., Sadeh, A., Ibdah, M., Ibdah, M. (2019). A *Pyrus communis* gene for p-hydroxystyrene biosynthesis, has a role in defense against the pear psylla *Cacopsylla bidens*. *Phytochemistry*, 161, 107-116. Plant Science Ranking: **Q1**. IF 2.905.
13. * Nawade, B., Yahyaa, M., Reuveny, H., **Shaltiel-Harpaz, L.**, Eisenbach, O., Faigenboim, A., Ibdah, M. (2019). Profiling of Volatile Terpenes from Almond (*Prunus dulcis*) Young Fruits and Characterization of Seven Terpene Synthase Genes. *Plant Science*, 287, 110187. Plant Science Ranking: **Q1**. IF 3.785.
14. *Nawade, B., Yahyaa, M., **Shaltiel-Harpaz, L.**, Kedoshim, R., Bosamia, T., Zohar M., Isaacson, T. Ibdah, M. (2020) Analysis of apocarotenoid volatiles during the development of *Ficus carica* fruits and characterization of carotenoid cleavage dioxygenase genes. *Plant Science*, 290, 110292. Plant Science Ranking: **Q1**. IF 3.785.
15. *Kraut-Cohen, J., Zolti, A., **Shaltiel-Harpaz, L.**, Argaman, E., Rabinovich, R., Stefan, J. G., & Minz, D. (2020). Effects of tillage practices on soil microbiome and agricultural parameters. *Science of the Total Environment*, 705, 135791 **Q1**. IF 5.589
16. *Nawade, B., Shaltiel-Harpaz, L., Yahyaa, M., Kabaha, A., Kedoshim, R., Bosamia, T. C., Ibdah, M. Characterization of terpene synthase genes potentially involved in black fig fly (*Silba adipata*) interactions with *Ficus carica*. *Plant Science* 110549. IF. 3.785
17. ** Neta A., Gafni R., Shaltiel-Harpaz L., Morin E., Morin S. (2021) Developing effective decision support tools for insect-pest management: using field experimental data for optimizing temperature-dependent population dynamics models. *Ecological Modelling* 440. IF:2.36

3. b. Articles in Hebrew refereed journals

1. *Cohen, Y., Goldstien, A., Hezroni, A., **Shaltiel-Harpaz, L.**, Lanski, A., Alon, T., Gilboa, A., Raviv, R. (2011). Spatial and temporal dynamics of *Helicoverpa armigera* in the Harod valley. *Nir Va telem* 34:37-46 (was subjected to Peer review)
2. **Shaltiel-Harpaz, L.**, Chen, Y., Ben Yashar, E., Graph, S., Peles, S., Cuoperberg, A., Tako, M., Rotman, R., Grinblat, Y., Openhiem, D., Idlin-Harari, S., Rsabinovitz, O., Zilberstien, M. (2013). Environmentally friendly agriculture- an applied project in the Hula Valley. Special issue on "Environment and Agriculture." *Ecology and Environment* 1:10-12
3. Marhaim, U., Cohen, Y., Adler, A., Torgeman, L., Zidenberg, R., **Shaltiel-Harpaz, L.** (2016). Supply of healthy food without increasing environmental impact -Panel discussion. *Ecology and Environment*, 2:153-165
4. **Shaltiel-Harpaz, L.**, Rak-Yahalom, H. (2020). The importance of Israeli agriculture in the Corona crisis and future crises. *Ecology and Environment* special online issue on the environmental impact of the corona pandemic.
<http://www.magazine.isees.org.il/CurrentIssue.aspx>

2. Articles or chapters in refereed books

1. ***Shaltiel-Harpaz, L.**, Masaphy, S., Tsrar, L., & Palevsky, E. (2016). Biorational, environmentally safe methods for the control of soil pathogens and pests in Israel. In *Agriculturally important Microorganisms* (pp. 273-291). Eds. Singh, H. Bahadur., Sarma, B. K., Keswani, .Springer Singapore.
2. ***Shaltiel-Harpaz, L.**, Tzaban, S. H. (2017). Agro-ecosystems. In Lotan, A., Safriel, U., & Feitelson, E. (Eds.). *Israel national ecosystem assessment: Interim report*. Hamaarag - Israel's National Nature Assessment Program. The Steinhardt Museum of Natural History. Tel-Aviv University. (in Hebrew)

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3. **Refereed conference proceedings**

1. *Groenteman, R., **Shaltiel, L.**, and Coll, M. (2009). Plants as heterogeneous resources for omnivorous bugs in conservation biological control. In Mason, P.G., Gillespie, D.R., and Vincent, C. (ed.), *Proceedings Third International Symposium on Biological Control of Arthropods*. Christchurch, NZ, 8-13 February 2009. Pp. 258-267
2. *Niv, A., **Shaltiel-Harpaz, L.**, Rippa, M., Shavit, R., and Horowitz, A. R. (2011). Can tomato be a potential host plant for pink bollworm. In *World Cotton Research Conference* (Vol. 5, pp. 258-260).
3. **Shaltiel-Harpaz, L.**, Levi, M., Palevsky, E., Gal, S., Murin, S., *Yermiyahu, U. (2018). Studying the interaction between plant nutrition and pests for the reduction of pesticide use and optimization of fertilizer application. *Proceedings of International IOBC-WPRS Working Group integrated control in protected crops – Mediterranean climate*, 04-07 September 2018, INIAV, Oeiras, Lisbon, Portugal.

4. **Other articles (in agricultural non-refereed journals in Hebrew)**

1. Openhiem, D., Palevski, E., Hurovitz, I., **Shaltiel-Harpaz, L.**, Reoveni, H., Aconis, O. (1997). The impact of pesticide free management on harmful and beneficial arthropods in an apple orchard 1994-1996. *Alon Hanotea* 51:346-356
2. **Shaltiel-Harpaz, L.**, Openhiem, D. (2006). 70 years of pear psylla research In Israel. *Alon Hanotea* 60:29-32
3. ***Shaltiel-Harpaz, L.**, Cuoperberg, A., Rabinovitz, O., Ben-Yakir, D. (2009). Control of *Euborellia Annulipis* (Dermaptera: Labiduridae) in groundnut fields at the Hula valley. *Nir Vatelem* 17:12-17
4. ***Shaltiel-Harpaz, L.**, Graph, S. (2010). Temporary recommendations for treatment of *Tuta absoluta* in growing tomatoes for industry in open areas. *Mivzak Yerakot* (Publication of vegetable Growers association) 219:9
5. ***Shaltiel-Harpaz, L.**, Graph, S. (2010). *Tuta absoluta* (Lepidoptera: Gelechiidae) A new pest in Israel . *Nir Vatelem* 23:7-10
6. ***Shaltiel-Harpaz, L.**, Hetzroni, A., Cohen, Y., Tamar, A. (2015). *A guide to pest monitoring*. Ministry of Agriculture and Rural Development, Training and Professional Service.
http://shaham.moag.gov.il/ProfessionalInformation/Pages/Pest_monitoring_guide.aspx
7. ***Shaltiel-Harpaz, L.**, Gerchman, Y., Ibdah, M., Kedoshim, R., Rachmany, D., Hatib, C., Bar Ya'akov, I., Soroker, V., Holand, D., (2015). Using resistant pear trees to control pear psylla, *Cacopsylla bidens*. *Alon Hanotea* 70: 50-55
8. ***Shaltiel-Harpaz, L.**, Kedoshim, R., Barshan, I., Rachmani, D., Yahyaa, M., Ibdah, M. (2017). Black fig fly: The secret of communication between the Syconium and the fertilizing wasp. *Alon Hanotea* 71 :32-35.
9. *Eisenbach, O., Bar Ya'akov, I., Hatib, C., Harel Beza, R., Holand, D., Dag, A., Reoveny, H., **Shaltiel-Harpaz, L.**, Ibdah, M. (2020). Detecting the causes for the differences in susceptibility of almond varieties (*Prunus amygdalus*) to the almond wasp (*Eurytoma amygdali*), for facilitating almond breeding. *Alon Hanotea* 74: 18-23