Rakefet Sharon, Ph.D.

Academic Degree: Ph.D.

Current Position: Senior Research Scientist, Plant Protection, MIGAL – Galilee Research Institute, Northern R&D, Israel / Senior lecturer and senior faculty member, Tel-Hai Academic College, Israel

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Main Scope

Agricultural entomologist specializing in insect communication, including insect–plant–pathogen interactions, mating communication, and other chemical, sensory, and behavioral signaling processes, with a particular emphasis on vector-borne plant diseases. Research integrates field and laboratory studies, chemical ecology, spatial–temporal and phenological modeling to develop sustainable, communication-based Integrated Pest Management (IPM) strategies for perennial cropping systems under changing environmental conditions.

Academic Education

Academic title	Institute	Research subject	Ending Year
Postdoctoral Associate	ARO, The Volcani Center, Beit Dagan, Israel. Department of Entomology with Dr. Ally Harari	Animal behavior- The effect of host plant volatiles on the attractant behavior of *Lobesia botrana* (Lepidoptera)	2004
Ph.D.	Technion- Israel Institute of Technology, Haifa, Israel. Department of Biology Supervision: Prof. M. Warburg, Prof. G. Dgani and Prof. Z. Arad	Ecology- Contribution of Invertebrate Groups to Leaf Litter Decomposition in Oak-Wood Soil.	2001
M.Sc.	Technion- Israel Institute of Technology, Haifa, Israel. Department of Biology. Supervision by: Prof. M. Warburg and Prof. G. Dgani	Ecozoology- The Reproductive system of the female salamander *S.S.infraimmaculata* and its Adaptation to Water Availability in Different Habitats.	1995
B.Sc.	Hebrew University of Jerusalem, Israel, Faculty of Agriculture	Agriculture - Animal Sciences - specialization in ruminants	1991

Positions Held and Academic Status

Years	Position
2016–present	Senior Research Scientist, MIGAL – Galilee Research Institute, Northern R&D

2023–present	Senior lecturer and senior faculty member, The University of Kiryat Shmona in the Galilee
2017–2021	Management Board Member, MIGAL–Northern R&D
2011–2016	Founder and Academic Consultant of Enology Studies, Ohalo Academic College
2009–2014	Department Head – Science & Environment Education, Ohalo Academic College

Research Projects (last 5 years)

Years	Role	Project Title	Funding Source
2020-2022	CI	The biology and epidemiology of diseases caused by *Xylella fastidiosa* in Israel	Ministry of Agriculture
2022-2023	PI	Development of a phenological model for the codling moth *(Cydia pomonella)*	Plant Council
2022-2023	PI	Development of a phenological model for *Anarsia lineatella*	Plant Council
2023–2026	CI	Beyond Xylella – Integrated strategies for mitigating *Xylella fastidiosa* impact in Europe	Horizon Europe
2023–2025	PI	Phenological models for fruit moth pests under climate change	Ministry of Agriculture
2023–2025	PI	Optimizing mating disruption timing against Anarsia lineatella under climate change	Ministry of Agriculture
2023–2025	CoPI	Epidemiology and biology of Pierce's disease in vineyards	Chief Scientist, MoA
2024–2025	PI	New methods for controlling leafhoppers in table grapes	Plant Council
2024–2025	PI	Development of control methods for *Anarsia lineatella*	Extension Services
2024-2028	PI	Introducing the parasitoid wasp *Tamarixia radiata* to control the Asian Citrus Psyllid *Diaphorina citri*	Ministry of Agriculture
2025	CoPI	Morphological and molecular identification of native parasitic wasps of the genus Tamarixia attacking the Asian citrus psyllid	Plant Council
2026-2028	PI	Development of behavior-based tools for managing the unique insect vector of *Xylella fastidiosa* (Pierce's disease) in Israeli vineyards	Ministry of Agriculture
2026-2028	PI	Evaluation of native parasitoid wasps for biological control of the Asian citrus psyllid (*Diaphorina citri*)	Ministry of Agriculture

Professional Memberships and Networks

Years	Organization
2024–present	COST – European Cooperation in Science & Technology (CA23122): Utilizing 10,000 Genomes of European Lepidoptera
2014–present	IOBC – International Organization for Biological Control
2019–present	Member, Scientific Committee – International Phytoplasmologist Working Group

LIST OF PUBLICATIONS

Articles in Reviewed Journals

1. **Sharon, R.**, Degani, G. & Warburg, M.R. (1997). Oogenesis and the ovarian cycle in *Salamandra salamandra infraimmaculata* (Amphibia; Urodela; Salmandridae), in fringe areas of the taxon's distribution. *Journal of Morphology*, 231(2), 149-160
2. Degani, G., **Sharon, R.** & Warburg, M.R. (1997). Ovarian steroid levels in *Salamandra salamandra infraimmaculata* during the reproductive cycle. *General and Comparative Endocrinology*, 106(3), 356-360
3. **Sharon, R.**, Degani, G. & Warburg, M.R. (2000). Ovarian cycle pattern of female *Salamandra salamandra infraimmaculata* in two habitats in Northern Israel. *Journal of Herpetology*, 34(3), 463-465
4. **Sharon, R.**, Degani, G. & Warburg, M.R. (2001). Comparing the soil macro-fauna in two oak wood forests: does community structure differ under similar ambient conditions? *Pedobiologia*, 45, 355-366
5. **Sharon, R.**, Zahavi T., Soroker V. & Harari A. (2003). Attraction of *Lobesia botrana* to grapevine cultivars: A field study. *Phytoparasitica*, 31, 305-306
6. Orenstein, S., Zahavi, T., Nestel, D., **Sharon, R.** Barkalifa, M & Weintraub, P.G. (2003). Spatial dispersion patterns of potential leafhopper and planthopper (Homoptera) vectors of phytoplasma, and their associated phytoplasmas, in wine vineyards. *Annals of applied Biology*, 142(3), 341-348
7. **Sharon, R.**, Soroker, V., Wesley, D., Zahavi, T., Harari, A.R., & Weintraub, P.G. (2005). *Vitex agnus-castus* is a preferred host plant for *Hyalesthes obsoletus*. *Journal of Chemical Ecology*, 31(5), 1051-1063
8. Cohen, M., Flam, R., **Sharon, R.**, Ifrach, H., Yeheskely-Hayon, D. & Warburg, M. (2005). The evolutionary significance of intra-cohort cannibalism in larvae of a xeric habitat salamander: An inter-cohort comparison. *Current Herpetology*, 24(2), 55-66
9. Cohen, M., Yeheskeli-Hayon, D., Warburg, M. R., Davidson, D., Halevi, G. & **Sharon, R.** (2006). Differential growth identified in salamander larvae half-sib cohorts: a survival strategy? *Development, Growth & Differentiation*, 48, 537-548
10. Zahavi, T., Peles, S., Harari, A., Soroker, V. & **Sharon, R.** (2007). Push and pull strategy to reduce *H. obsoletus* population in vineyards by *Vitex agnus castus* as trap plant. *Bulletin of Insectology*, 6 (2), 297-298
11. **Sharon, R.**, Zahavi, T., Soroker, V. & Harari, A. R. (2009). The effect of grape vine cultivars on *Lobesia botrana* (Lepidoptera: Tortricidae) population levels. *Journal of Pest Science*, 82, 187-193
12. **Sharon, R.**, Peles S., Gordon, D. & Harari, A.R. (2010). Intraspecific attraction and host tree selection by adult *Capnodis tenebrionis*. *Israel Journal of Plant Sciences*, 58, 53-60

13. Sokolsky, T., Cohen, Y., Zahavi, T., Sapir, G. & **Sharon, R.** (2013). Potential efficiency of grapevine leafroll disease management strategies using simulation and real spatio-temporal disease infestation data. *Australian Journal of Grape and Wine Research*, 19(3), 431-438
14. Zahavi, T., **Sharon, R.**, Sapir, G, Mawasi, M., Dafny-Yelin, M. & Naor, V. (2013). The long-term effect of Stolbur phytoplasma on grapevines in the Golan Heights. *Australian journal of grape and wine research*, 19(2), 277-284
15. Sokolsky, T., Cohen, Y., Zahavi T., Sapir, G. & **Sharon, R.** (2013). Risk assessment of grapevine leafroll disease for developing future site-specific disease spread control tactics and strategies. *Precision Agriculture*, 13, 593-599
16. Peled, Y., Bar-Shalom, O., & **Sharon, R.** (2014). Characterization of pre-service teachers' attitude to feedback in a wiki-environment framework. *Interactive Learning Environments*, 22(5), 578-593
17. Iasur-Kruh L., Taha-Salaime L., Robinson W.E., **Sharon R.**, Droby S., Perlman S.J. & Zchori-Fein E. (2014). Microbial associates of the vine mealybug *Planococcus ficus* (Hemiptera: Pseudococcidae) under different rearing conditions. *Microbial Ecology*, 69(1), 204-214
18. Dafny Yelin M., Orbach D., Brudoley R., Shachar Barkai R., Zahavi T., **Sharon R.**, Tomer M., Sofer-Arad C., Weintraub P., Mawassi M., & Naor V. (2015). The source plant for phytoplasma stolbur type II in the Israeli vineyards is still a mystery. *Phytopathogenic Mollicutes*, 5(1s), S73-S74.
19. **Sharon R.**, Tomer M., Sokolsky T., Sofer-Arad C., Harari A., & Zahavi T. (2015). Trap plants reduces yellows disease incidence in commercial vineyards. *Phytopathogenic Mollicutes*, 5(1s), S107-S108.
20. **Sharon, R.**, Harari A., Zahavi, T., Raz R., Dafny-Yelin, M., Tomer M., Sofer-Arad C., Weintraub P. & Naor, V. (2015). A yellows disease system with differing principal host plants for the obligatory pathogen and its vector. *Plant Pathology*, 64(4), 785-791
21. **Sharon R.**, Tirtza Z., Sokolsky T., Sofer-Arad C., Tomer M., Kdoshim R. & Harari A. (2016). Mating disruption method against the vine mealybug, *Planococcus ficus*: effect of sequential treatment on infested vines. *Entomologia Experimentalis et Applicata*, 161(1), 65-69
22. Seroussi, D.E. & **Sharon, R.** (2016). Peer Lecturing as Project-Based Learning: Blending Socio-Affective Influences with Self-Regulated Learning. *International Education Studies*, 10(1), 1913-9039
23. Seroussi, D.E., Yaffe, Y. & **Sharon, R.** (2017). "Careful, now you are both the learner and the teacher!": Student teachers' evaluation of inquiry-based peer lecturing as a tool in teacher training. *International Education Studies*, 10 (6), 100
24. Iasur-Kruh, L., Naor, V., Zahavi, T., Ballinger, M. J., **Sharon, R.**, Robinson, W., Perlman S. & Zchori-Fein, E. (2017). Bacterial associates of *Hyalesthes obsoletus* (Hemiptera: Cixiidae), the insect vector of bois noir disease, with a focus on cultivable bacteria. *Research in Microbiology*, 168(1), 94-101
25. Shapira, I., Keasar, T., Harari, A., Kishinevsky, M., Steinitz,H., Sofer-Arad, C., Tomer, M., Avraham, A. & **Sharon, R.** (2018). Does mating disruption of *Planococcus ficus* and *Lobesia botrana* affect the diversity, abundance and composition of natural enemies in Israeli vineyards? *Pest Management Science*, 74(8), 1837-1844
26. Shapira I., Gavish-Regev E., **Sharon R.**, Harari A.R., Kishinevsky M. & Keasar T. (2018) Habitat use of crop pests and natural enemies in a Mediterranean vineyard agroecosystem. *Agriculture, Ecosystems & Environment*, 267, 109-118
27. Seroussi, D.E., **Sharon, R.**, Peled, Y. & Yaffe, Y. (2019). Reflections on Peer Feedback in Disciplinary Courses as a Tool in Pre-service Teacher Training. *Cambridge Journal of Education*, https://doi.org/10.1080/0305764X.2019.1581134

28. Crowder, D. W., Li, J., Borer, E. T., Finke, D. L., **Sharon, R.**, Pattemore, D., & Medlock, J. (2019). Species interactions affect the spread of vector-borne plant pathogens independent of transmission mode. *Ecology*, 100(9), e02782
29. Krasnov, H., Cohen, Y., Goldshtein, E., Ovadia, S., **Sharon, R.**, Harari, A. & Blank, L. (2021). Inconsistent effects of local and landscape factors on two key pests in Israeli vineyards. *Journal of Applied Entomology*, 145(9), 900-910
30. Harari, A. & **Sharon, R.** (2022). The contemporary and prospective risk of resistance to the mating disruption method. *Entomologia Generalis*, 42(2), 275-288 (invited review)
31. Zisovich, A., Dror, D., **Sharon, R.** & Bahar, O. (2022). *'Candidatus Phytoplasma pyri'* detection in symptomatic nectarine and peach trees in northern Israel, *Phytopathogenic Mollicutes* 12(1), 1-7
32. Seroussi, D. E., Peled, Y., **Sharon, R.**, Rothschild, N., Halperin Barlev, O., Weissblueth, E., & Harpaz, G. (2023). 'A Different Voice'in Peer Feedback: Gender Specificity in Students' Willingness to Provide Peer Feedback. *Education Sciences*, 13(7), 654 (1-17)
33. Chen, A., Nagar, Y., Shoshani, G., & **Sharon, R.** (2023). Deep learning for almond fruit detection at different growth stages for orchards' pest management using unmanned aerial vehicles. *Precision agriculture'23* (pp. 847-854). *Wageningen Academic Publishers*
34. Ganem, Z., Ferrante, M., Lubin, Y., Armiach Steinpress, I., Gish, M., **Sharon, R.**, Harari, A.H., Keasar, T. & Gavish-Regev, E. (2023). Effects of Natural Habitat and Season on Cursorial Spider Assemblages in Mediterranean Vineyards. *Insects*, 14(10), 782
35. Tomer, M., Chiel, E., Gidron-Heinemann, L. & **Sharon R.** (2024). A new vector of *Xylella fastidiosa*: The role of *Mesoptyelus impictifrons* as a vector in Israel. *Phytopathology*, 114(12), 2546-2550

Reviewed papers in proceedings

1. **Sharon, R.,** Degani, G., & Warburg, M. (1996). Environmental effects on reproduction in *Salamandra salamandra infraimmaculata* in north Israel. *Preservation of Our World in the Wake of Change, Israel Society of Ecology and Environed Quality Science, Jerusalem*, 527-529

2. **Sharon, R**., Degani, G. and Warburg, M.R. (1999). Contribution of different soil macro-invertebrate taxa to forest leaf litter decomposition rate as affected by season. *6th IMSMTC Barcelona, Spain, 198-200.*

3. Zahavi, T**., Sharon, R**., Mawassi, M., & Naour, V. (2009). Long term effects of stolbur phytoplasma on grapevines in Israel. *In Extended abstracts 16th Meeting of OCVG, Dijon, France 31, 147-148.*

4. Cohen, Y., **Sharon, R.**, Sokolsk & T., Zahavi, T. (2011). Modified Hot-Spot analysis for spatio-temporal analysis: a case study of the leaf-roll virus expansion in vineyards. *Graspa Working Papers, 1-4.*

5. **Sharon, R**., Zahavi, T., Sokolski, T., Sofer-Arad, C., Sapir, G. Mawassi, M., & Cohen, Y. (2012). The combined effect of preliminary infested vines, spatial spread pattern and the VMB population level on the Grapevine leafroll disease infestation rate. *Proceeding of the 17th Congress of ICVG, Davis, California, USA. 182-183.*

6. Dafni-Yalin, M., Orbach, D., Zahavi, T., Mawassi, M., Weintraub, P., **Sharon, R.** & Naor V. (2012). Stolbur type II phytoplasma in north Israel vineyards: what is the plant source? *Proceedings of the ICVG, Davis, CA, USA. 17, 228-229.*

7. **Sharon R.**, Tomer M. & Zisovich Charitt A. (2025). Seasonal Dispersal of *Cacopsylla bidens* and Its Role in the Epidemiology of *Candidatus Phytoplasma pyri* in Mixed-Crop Systems. *Proceedings of the International Phytoplasmologist Working Group (IPWG), CAR-Indian Institute*

of Sugarcane Research (IISR), Lucknow, Uttar Pradesh, India. Phytopathogenic Mollicutes, 15 (1), 53-54.

8. Tomer M., Zisovich Charitt A. & **Sharon R**. (2025). First Identification of *Cacopsylla bidens* as a Vector of *Candidatus Phytoplasma pyri*, the Causal Agent of Pear Decline. *Proceedings of the International Phytoplasmologist Working Group (IPWG), ICAR-Indian Institute of Sugarcane Research (IISR), Lucknow, Uttar Pradesh, India. Phytopathogenic Mollicutes*, 15 (1), 55-56.

Books and Book chapters

1. Harari A & **Sharon R** (2016). Chemical communication. In: *Biocommunication: Sign-Mediated Interactions between Cells and Organisms*, (pp. 229-256), World Scientific.
2. Harari, A. R., **Sharon, R**. & Weintraub, P. G. (2016). Manipulation of Insect Reproductive Systems as a Tool in Pest Control. In: *Advances in Insect Control and Resistance Management* (pp. 93-119), Springer, Cham.
3. Degani, G., Mendelssohn, H., Warburg, M. R., Shkolnik, A., Nevo, E., Goldberg, T., Pearlson, O. & **Sharon, R.** (2019). The fire salamandra (*Salamandra infraimmaculata*) and the banded newt (*Triturus vittatus*) alone the southern border of their distribution. Scientific Research Publishing, Inc. USA.
4. Naor V., Zahavi T. & **Sharon R**. (2023). Diversity, distribution and status of phytoplasma diseases in Israel. In: *Diversity, Distribution, and Current Status* Vol I, Chapter 10 (pp. 211-223) Academic Press.

Articles in professional journals (in Hebrew)

1. **Sharon, R**., Zahavi, T., Soroker, V., Harari, A. & Weintroub, P. (2006). *Vitex agnus castus* as trap plant to reduce *H. obsoletus* population. *Journal of the Organic and Biology Agriculture Organization, 8, 23-25.*
2. **Sharon, R**., Soroker, V., Harari, A. & Zahavi, T. (2008). *Vitex agnus castus* as trap plant in Push and pull strategy to reduce the Yellows disease vector population. *Journal of the vine council, 4, 22-23.*
3. **Sharon, R.**, Sela, L., Peretz, S., Peles, S. & Harari, A. (2008). Pomegranate pests. *Haklaei Israel, 36, 34-37.*
4. **Sharon, R.**, Peles, S., Peretz, S. & Harari, A. (2009). Mating disruption and net cover methods against *Cryptoblabes gnidiella* (Pyralidae) and *Lobesia botrana* (Tortricidae) in pomegranate orchards. *Yevul Sie - Journal of Advanced Agriculture, 39, 24-30.*
5. **Sharon,** R., Akunis, O., Holand, D., Ytzhaki, N., Hatib, K. & Zchori-Fein, E. (2010). Net cover against fruit pests in pomegranate and persimmon orchards. *Alon Hanotea, 64, 16-20.*
6. **Sharon, R**., Sokolski, T., Sapir, G., Cohen, Y., Harari, A., Harcavi, A. & Zahavi, T. (2011). Presence of the vine mealybug in young vineyards. *Alon Hanotea, 65, 25-28.*
7. Zahavi, T. **Sharon, R**. Sapir G. & Naor, V. (2011). Yearly survey on yellows disease development in vineyards. *Alon Hanotea, 65, 29-33.*
8. **Sharon, R**., Peles, S., Sofer-Arad, C., Noi, M., Lahav, C. & Draishpon, Y. (2012). Environmental friendly control of *Aonidiella aurantii* and *Aonidiella orientalis* in Mango plantation. *Alon Hanotea, 66, 20-23.*
9. Iasur-Kruh, L., Taha-Salaima, L., Zchori-Fein, E., **Sharon, R.,** Drobi, S. & Zahavi, T. (2013). Who is inside the vine mealybug. *Alon Hanotea, 67, 41-43*
10. Keasar, T., Harari, A., **Sharon, R.**, Zahavi, T., Gavish-Regev, E., Warburg-Hecht, S., Sokolsky,

T. & Sofer-Arad C. (2013). Nectar-rich plants in the margins of vineyard as a conservation biocontrol strategy. *Yevul Sie - Journal of Advanced Agriculture, 88, 26-35.*

11. Dafni-Yelin, M., Naor, V., Brodolay, R., Berkovits, R.S., Zahavi, T., **Sharon, R**., Tomer, M., Sofer-Arad, C., Weintraub, P., Muwassi, M. & Orbach, D. (2014). The source of the yellows bacteria in vineyards in the Golan Heights. *Alon Hanotea, 9, 18-22.*
12. Sofer-Arad, C., Sokolski T., Tomer M., Noi, M., Lahav, C., Keinan A., Ben-Ami E. & **Sharon R**. (2015). Control of *Aonidiella aurantii* in avokado plantation. *Alon Hanotea, 69, 40-43.*
13. **Sharon, R**., Sofer-Arad, C., Tomer, M., Avraham A., Kdoshim, R., Peles, S., Sokolsky, T., Shafir, R., Salomon-Levi, R., Noy, M. & Lahav, C. (2016). The mango soft scale *Coccus mangiferae* and its parasitoid *Microterys flavus*. *Alon Hanotea, 70(8), 28-35.*
14. **Sharon R**., Sofer-Arad, C., Peles S., Sokolsky T., Tomer M. & Avraham A., (2017). Management of the citrus mealybug, *Planococcus citri*, in banana plantations. *Alon Hanotea, 71(5), 25-28.*
15. Ment D., Yossef E., Protasov A., Mendel Z., Mondaca L., Ben-Yehuda S., Sofer-Arad C., **Sharon R.,** Boymel A., Levin E., Allouch A., Yacobi G., Kokici H., & De Lillo E. (2019). Entomopathogenic fungi in pest management in Israel. *Yevul Sie - Journal of Advanced Agriculture, 151:180-190.*
16. **Sharon R.,** Zahavi T., Tomer M., Avraham A., & Farkash Z. (2020). The green leafhoppers complex in wine vineyards and the potential damage of the different species. *Alon Hanotea, 74, 33-36.*
17. Zahavi T., **Sharon R.,** Tomer M., Sokolsky T., Yehuda Y., Raikin-Barak S. & Crain O. (2020). Redden leaves in wine vineyards: research on viruses and their influence. *Alon Hanotea, 74, 39-42.*
18. Salomon M., **Sharon R.** & Tomer M. (2025). Biological control of the Asian citrus psyllid. *Et Hadar, 16-20.*