CV

Name: Nawaf Abu-Khalaf
Date of birth: 2nd. June 1971
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Resume:

I am an associate professor specializing in “Agricultural and Biological Engineering”. In 1995 I have got my engineering B.Sc. degree from Jordan University of Science and Technology in "Agricultural Engineering and Technology". I obtained my M.Sc. in "Agricultural Sciences / Agricultural Engineering" at the University of Copenhagen in 2001. I got my Ph.D. in “Biochemistry (Biotechnology)” at the Faculty of Engineering, The University of Southern Denmark in 2006.
I have worked in universities as a researcher and post-doc. I have also experienced working in industrial companies.

Professional interests:

- Agricultural and Biological Engineering,
- Biotechnology,
- Environmental technology,
- Multivariate data analysis (chemometrics),
- Sensors (*e.g.* near infra-red (optical), chemical, *etc*.).

Professional experience:

June 2016- now	Associate Professor at Palestine Technical University – Kadoorie, Palestine.
August 2016-August 2020	Head of Kadoorie Agricultural Research Center (KARC).
2011- May 2016	Assistant Professor at Palestine Technical University – Kadoorie, Palestine.
2008 –2011	Innovation consultant, AgroTech A/S (Institute for Agri Technology and Food Innovation), Aarhus, Denmark.
2008 –2008	Environmental production, Munters-Turbovent A/S, Aars, Denmark.
2007 –2008:	Bioprocess and quality specialist (compost and biogas), Solum A/S, Hedehusene, Denmark (six months as ‘substitute of maternity leave”).
2006 –2007:	Postdoc, Institute of Chemical Engineering, Biotechnology and Environmental Technology, University of Southern Denmark.
2006:	Research assistant, Department of Biochemistry and Molecular Biology, University of Southern Denmark.
2002 - 2003:	Research assistant, Agricultural Sciences / AgroTechnology, The Royal Veterinary and Agricultural University (KVL) (Now it is called: University of Copenhagen), Copenhagen, Denmark.
1996 -1999:	Engineer, Project Directorate, Ministry of Agriculture, Palestinian National Authority. Palestine

Education:

Year	*Degree*	*Subject*	*University*
2006	PhD	Biochemistry / Biotechnology *Title of thesis:* ‘Identification and quantification of odorants from livestock buildings’	University of Southern Denmark, Odense, Faculty of Engineering, Department of Biochemistry and Molecular Biology, Denmark
2001	M.Sc.	Agricultural Sciences / Agricultural Engineering	University of Copenhagen (The Royal

		Title of thesis: 'Sensing taste of fruits and vegetables using near infrared (NIR) technology'	Veterinary and Agricultural University), Department of Agricultural Sciences, Copenhagen, Denmark
1995	B.Sc.	Agricultural Engineering and Technology	Jordan University of Science and Technology, Jordan

Languages:

Language	Speak	Write	Understand
Arabic (native)	5	5	5
English	5	5	5
Danish	4	4	4

Scale: 1-5 (best)

Publications:

-Thesis and dissertation:

Abu-Khalaf, N. 2006. *Identification and quantification of odorants from livestock buildings*, University of Southern Denmark, Faculty of Engineering, Department of Biochemistry and Molecular Biology, Denmark, PhD thesis.

Abu-Khalaf, N. 2001. *Sensing taste of fruits and vegetables using near infrared (NIR) technology*, The Royal Veterinary and Agricultural University, Department of Agricultural Sciences, AgroTechnology. Copenhagen - Denmark, 71 pp. M.Sc. thesis.

-Refereed journal papers:

Najjar, K., Abu-Khalaf, N. 2021. Non-Destructive Quality Measurement for Three Varieties of Tomato Using VIS/NIR Spectroscopy. *Sustainability (Switzerland), 13*, 10747. DOI: 10.3390/su131910747.

Natshed, B., Abu-Khalaf, N.& Abubaker, S. 2021. Evaluating cauliflower (*Brassica oleracea*) production under different fertilizer systems. *Research on Crops*, 22(3), 556-563. DOI : 10.31830/2348-7542.2021.103.

Abu-Khalaf, N. 2021. Identification and Quantification of Olive Oil Quality Parameters Using an Electronic Nose. *Agriculture*, 11(7), 674. DOI: 10.3390/agriculture11070674.

Najjar, K., & Abu-Khalaf, N. 2021. Visible/near-infrared (VIS/NIR) spectroscopy technique to detect gray mold disease in the early stages of tomato fruit. *Journal of Microbiology, Biotechnology and Food Sciences*, e3108. DOI: 10.15414/jmbfs.3108.

Masoud, W.; Al-Qaisi, A. & Abu-Khalaf, N. 2021. Growth Prediction of the Food Spoilage Yeast Debaryomyces Hansenii using Multivariate Data Analysis. *Palestine Technical University Kadoorie Research Journal*, 9(1), 22–32. DOI: 10.53671/ptukrj.v9i1.160.

Sayara, T.; Khayat, S.; Saleh, J.; Abu-Khalaf, N. & van der Steen, P. 2021. Algal–bacterial symbiosis for nutrients removal from wastewater: The application of multivariate data analysis for process monitoring and control. *Environmental Technology & Innovation*, 101548. DOI: 10.1016/j.eti.2021.101548.

Al-Mahasneh, M.; Al-U'datt, M.; Rababah, T.; Al-Widyan, M.; Abu Kaeed, A.; Al-Mahasneh, A.J. & Abu-Khalaf, N. 2021. Classification and prediction of bee honey indirect adulteration sing physiochemical properties coupled with K-Means clustering and simulated annealing-artificial neural networks (SA-ANNs). *Journal of Food Quality*, 8, 1-9. DOI: 10.1155/2021/6634598.

Natsheh, B., & Abu-Khalaf, N. 2020. Influence of different types of fertilizers application on the lettuce (Lactuca sativa L.) growth and quality. *Palestine Technical University Kadoorie Research Journal*, 8(2), 40–53. DOI: 10.53671/ptukrj.v8i2.92.

Oates, M. J., Abu-Khalaf, N., Molina-Cabrera, C., Ruiz-Canales, A.; Ramos, J. & Bahder, B.W. 2020. Detection of Lethal Bronzing Disease in Cabbage Palms (*Sabal palmetto*) Using a Low-Cost Electronic Nose. *Biosensors (Switzerland), 10(11),* 188-202. DOI: 10.3390/bios10110188.

Abu-Khalaf, N., & Abu Rumaila, B. 2020. Electronic tongue and BOX-PCR for categorization of different Fusarium strains. *Plant Cell Biotechnology and Molecular Biology*, 21(45-46), 121-128. Retrieved from https://ikprress.org/index.php/PCBMB/article/view/5507.

Mudalal, S., Zaid, A., Abu-Khalaf, N. & Petracci, M. 2020. Predicting the quality traits of white striped turkey breast by visible/near infrared spectroscopy and multivariate data analysis. *Italian Journal of Animal Science,* 19(1), 676-686. DOI: 10.1080/1828051X.2020.1779138.

Abu-Khalaf, N. & Hmidat, M. 2020. Visible/Near Infrared (VIS/NIR) spectroscopy as an optical sensor for evaluating olive oil quality. *Computers and Electronics in Agriculture*, 173: art. no. 105455.

Zaid, A., Abu-Khalaf, N., Mudalal, S., & Petracci, M. 2020. Differentiation between normal and white striped turkey breasts by visible/near infrared spectroscopy and multivariate data analysis. *Food Science of Animal Resources*, 40 (1), 96-106. DOI: 10.5851/kosfa.2019.e88

Abu-Khalaf, N., Zaid, A. N., Jaradat, N., Alkilany, A. M., Abulateefeh, S. R., Al Ramahi, R., & Ghanem, M. 2019. Identification of substandard drug products using electronic tongue: cefdinir suspension as a pilot example. *Drug Design, Development and Therapy*, 13, 3249-3258. DOI: 10.2147/DDDT.S214228

Al Ramahi, R., Zaid, A. N., & Abu-Khalaf, N. 2019. Evaluating the potential use of electronic tongue in early identification and diagnosis of bacterial infections. *Infection and Drug Resistance*, 12, 2445-2451. DOI: 10.2147/IDR.S213938

Natour, Y., & Abu-Khalaf, N. 2018. Agricultural machinery industry in Palestine -reality and challenges. *The Arab Farmer Magazine* (in Arabic language, abstract in English), 50, 8-13.

Abu-Khalaf, N., Zaid, N. A., Jaradat, N., AlKilany, A., Abu Rumaila, B., Al Ramahi, R., Shweiki, S., Nidal, S., & Surakhi, N. 2018. The Taste of Commercially Available Clarithromycin Oral Pharmaceutical Suspensions in the Palestinian Market: Electronic Tongue and In Vivo Evaluation. *Sensors (Switzerland)* 18(2), 454-464. DOI: 10.3390/s18020454.

Qneibi, M., Jaradat, N., Zaid, A.N., Abu-Khalaf, N., Natsheh, A.R., & Hussein, F. 2018. Evaluation of taste, total phenols and antioxidant for fresh, roasted, shade dried and boiled leaves of edible Arum palaestinum Bioss. *Marmara Pharmaceutical Journal*, 22(1): 052-058. DOI: 10.12991/mpj.2018.40.

Salman, M., Shahin, N., Abu-Khalaf, N., Jawabrih, M., Rumaileh, B. A., Abuamsha, R., & Barghouthi, S. A. 2017. Antagonistic Activity of Pseudomonas Fluorescens Against *Fusarium Oxysporum f. sp. Nievum* Isolated from Soil Samples in Palestine. *Journal of Plant Studies*, 6(2), 1-8.

Shahin, N., Abu-Khalaf, N., Mazen Salman, M., & Harun Parlar. 2016. Testing the Possibility of Photochemical Synthesis of Chlorinated Phenols, Benzenes and Biphenyl: Pre-study Guide for Standards Synthesis. *Palestine Technical University Research Journal*, 4(2), 73-83. DOI: 10.53671/ptukrj.v4i2.47.

Zude-Sasse, M., Fountas, S., Gemtos, T.A., & Abu-Khalaf, N. 2016. Applications of precision agriculture in horticultural crops – A review. *European Journal of Horticultural Science*, 81(2), 78-90. DOI: 10.17660/eJHS.2016/81.2.2.

Abu-Khalaf, N., & Hamdan, Y. 2016. The opinion of Palestinian society in Tulkarm district on genetically modified (GM) crops. *Bioscience and Bioengineering*, 2(1), 1-7.

Abu-Khalaf, N. 2015. Sensing tomato's pathogen using Visible/Near infrared (VIS/NIR) spectroscopy and multivariate data analysis (MVDA). *Palestine Technical University Research Journal*, 3(1), 12-22. DOI: 10.53671/ptukrj.v3i1.35.

Natsheh, B., Abu-Khalaf, N., & Mousa, S. 2015. Strawberry (*Fragaria ananassa Duch.*) plant productivity quality in relation to soil depth and water requirements. *International Journal of Plant Research*, 5(1), 1-6.

Marei, M., Rdaydeh, D., Karajeh, D., & Abu-Khalaf, N. 2014. Effect of using magnetic brackish water on irrigated bell pepper crop (*Capsicum annuum* L.) characteristics in lower Jordan Valley/West. Journal of Agricultural Science and Technology A, 4, 830-838. DOI: 10.17265/2161-6256/2014.10.005.

Abu-Khalaf, N., & Natour, Y. A. R. 2014. Agricultural mechanization situation in the Palestinian territories. *Agricultural Mechanization in Asia, Africa, and Latin America (AMA),* 45(3), 18-21.

Salman, M., Abu-Khalaf, N., Abu Rumaileh, B., Jawabreh, M., & Abuamsha, R. 2014. Detoxification of olive mill waste water using the white rot fungus Phanerochaete chrysosporium. *International Journal of Environment and Sustainability*, 3 (1), 1-6.

Abu-Khalaf, N., & Salman, M. 2014. Visible/Near infrared (VIS/NIR) spectroscopy and multivariate data analysis (MVDA) for identification and quantification of olive leaf spot (OLS) disease. *Palestine Technical University Research Journal*, 2 (1), 1-8. DOI: 10.53671/ptukrj.v2i1.21.

Khayat, S., Llado, X. M., Natsheh, B., Sayara, T., Abu-Khalaf, N., & Hamdan, Y. 2014. Investigation of the presence of halogenated bi-products formation in the drinking water network in Tulkarm District/Palestine. *Palestine Technical University Research Journal*, 2 (1), 29-34.

Abu-Khalaf, N., Khayat, S. & Natshed, B. 2013, Multivariate data analysis to identify the groundwater pollution sources in Tulkarm area / Palestine. *Science and Technology*, 3, 99-104.

Abu-Khalaf, N., Almasri, M., Hajjaj, A., Abbadi, N., Salah, H., Zakarne, J., Harb, J., & Salman, M. 2013. Effect of different plastic liners on the quality of fresh-cut Jew's mallow leaves (*Corchorus olitorius* L.) during storage under different temperatures. *British Journal of Applied Science & Technology*, 3 (3), 462-471.

Abu-Khalaf, N., & Salman, M. 2013, Detecting plant diseases using visible/near infrared spectroscopy. *NIR news*, 24, 12-25.

Fountas, S., Paraforos, D., Cavalaris, C., Karamoutis, C., Gemtos, T. A., Abu-Khalaf, N., & Tagarakis, A. 2013. A five-point penetrometer with GPS for measuring soil compaction variability. *Computer and Electronics in Agriculture*, 96, 109-116.

Natsheh, B., Abu-Khalaf, N., Sayara, T., Khayat, S., & Salman, M. 2013. Multivariate data analysis for bioremediation of contaminated soil through interactions between heavy metals microbes and plants. *Palestine Technical University Research Journal*, 1, 21-28. DOI: 10.53671/ptukrj.v1i1.9.

Abu-Khalaf, N., & Amarni, A. A. A. 2012. Precision farming (in Arabic language, abstract in English). *The Arab Farmer Magazine*, 38, 45-48.

Khayat, S., Marei, A., Natsheh, B., & Abu-Khalaf , N. 2012. Mechanisms of groundwater pollutants transport in Tulkarm Area / Palestine. *Resources and Environment*, 2 (6), November.

Abu-Khalaf, N., & Haselmann K. F. 2012. Characterization of odorants in an air wet scrubber using direct aqueous injection-gas chromatography-mass spectrometry (DAI-GC-MS) and solid phase extraction (SPE-GC), *American Journal of Environmental Engineering*, 2 (3), 58-68.

Abu-Khalaf, N., & Iversen, J. J. L. 2007. Calibration of a sensor array (an electronic tongue) for identification and quantification of odorants from livestock buildings. *Sensors (Switzerland), 7, 103-129.*

Abu-Khalaf, N., & Iversen, J. J. L. 2007. Classification of mixtures of odorants from livestock buildings by a sensor array (an electronic tongue). *Sensors (Switzerland), 7, 130-143*.

Abu-Khalaf, N., Bennedsen, B. S., & Bjørn, G. 2004. Distinguishing carrot's characteristics by Near Infrared (NIR) reflectance and multivariate data analysis. *Agricultural Engineering International: the CIGR Journal of Scientific Research and Development, http://cigr-ejournal.tamu.edu/* Volume VI.

Abu-Khalaf, N., & Bennedsen, B. S. 2004. Near Infrared (NIR) technology and multivariate data analysis for sensing taste attributes of apples. *International AgroPhysics* 18: 203-211.

Abu-Khalaf, N., & Bennedsen, B. S. 2002. Plum-tasting using NIR technology. *International AgroPhysics* 16: 83-89.

-Conference publications:

Fernández López, A., Ferrández-Villena García, M., Oates, M, Molina Cabrera, C., Conesa Celdrán, A., J. Ramos, J. Abu Khalaf, N. & Ruiz Canales, A. (2021). Use of low-cost electronic nose, tongue and eye for monitoring agri-food processes. In: *The II University Congress on Food Innovation and Sustainability (CUISA),* at The Higher Polytechnic School of Orihuela (EPSO) of the Miguel Hernández University of Elche, Spain, 16-17 September (Abstract in English, Paper in Spanish).

Natshed, B. & Abu-Khalaf, N. 2020. Impact of using Different Fertilizer Systems on Cauliflower Crop (*Brassica oleracea var. Botrytis*) Production and Quality. In: *The 7th International Conference on Agriculture 2020 – (AGRICO 2020) under the theme "The 4th Agricultural Revolution: Growing Population and Deriving Changes in Farming Systems".* Bangkok, Thailand, 26-27 November.

Taha, H., & Abu-Khalaf, N. 2020. Quality control for herbal medicinal plants using a sensor array (an electronic tongue). In: *The 7th International Conference of Biotechnology, Environment and Engineering Sciences (ICBE7),* Stockholm, Sweden, 26 June, pp. 25–33. DOI: 10.46617/icbe7001.

Abu-Khalaf, N. 2019. Colorimeter for Olive Oil Quality. In: *The Fourth International Conference on Olive in Palestine (ICOP 4th)*. Palestine Technical University - Kadoorie (PTUK), 19-20 November.

Ayyad, Z., Vali, E., Hmidat, M., Bendini, A., Accorsi, R., Manzini, R., Toschi, T. G., & Abu-Khalaf, N. 2019. Effects of Temperature Fluctuation on VOO Oxidation Quality and Shelf-life. In: *The Second Edition of the international Congress on Water and Environment Studies*. Faculté Pluridisciplinaire de Nador, Selouane, Morocco, 14th - 15th November.

Abu-Khalaf, N. 2017. Post-harvest technology. In*: International Conference on Food Security in Palestine.* Millennium Hotel – Ramallah, Palestine. December 6.

Abu-Khalaf, N. 2016. Sensors applications for olive oil quality. In: *The Third International Conference on Olive in Palestine (TICOP).* Palestine Technical University – Kadoorie (PTUK), Tulkarm, Palestine, 07-08 December.

Abu-Khalaf, N., Abu Rumaileh, B., Jawabreh, M., Shahin, N., &Salman, M. 2016. Feasibility study for identification and quantification of olive oil adulteration in Palestine using VIS/NIR spectroscopy. *The 4th Conference of Biotechnology Research and Application in Palestine. The Arab American University, Jenin, Palestine, 21 March.*

Salman, M., Abu-Khalaf, N., Abu Rumaileh, B., Jawabreh, M., Shahin, N., &Abuamsha, R. 2016. Use of bacteria as biocontrol agents against Fusarium wilt disease of watermelon caused by Fusarium oxysporum f. sp. niveum in Palestine. *The 4th Conference of Biotechnology Research and Application in Palestine. The Arab American University, Jenin, Palestine, 21 March.*

Abu-Khalaf, N., Khayat, S.; & French, P. 2015. Portable water sensing system. *First Palestinian-Dutch Academic Cooperation (PADUCO) program on water conference, Birzeit University, Palestine, 24-26 February*.

Radaydeh, D.; Karajeh, D.; Abu-Khalaf, N.; & Marei, A. 2015. Effect of using magnetized treated water in irrigation of bell pepper and beans in Al Jiftlik, Palestine. *First Palestinian-Dutch Academic Cooperation (PADUCO) program on water conference, Birzeit University, Palestine, 24-26 February.*

Abu-Khalaf, N., & Salman, M. 2014. Sensing olive diseases using visible/near infrared (VIS/NIR) spectroscopy. *The 11th. Arab Congress of Plant Protection, organized by Arab Society for Plant Protection and Faculty of Agricultural Technology – Al Balqa Applied University, Meridien Amman Hotel, Amman Jordan, 9-13 November.*

Abu-Khalaf, N., & Salman, M. 2014. Feasibility study of remote sensing for olive leaf spot (OLS) using spectroscopy and support vector machine (SVM) classification. *The 5th. International workshop in Biotechnology, under the theme "Biotechnology and its role in the economic development in the Arab world"*. Khartoum, Sudan, 25-26 March, pp. 44.

Abu-Khalaf, N., &Salman, M. 2013. Sensing olive diseases using spectroscopy "A feasibility study". In: *The Second International Conference on Olive in Palestine (SICOP).* Palestine Technical University – Kadoorie (PTUK), Tulkarm, Palestine, 25-26 November.

Abu-Khalaf, N., &Salman, M. 2012. Biological control of tomatoes gray mold (Botrytis cinerea) postharvest disease. In: *The Third Conference on Biotechnology Research and Application in Palestine.* Al-Quds University, Jerusalem, 20 October.

Abu-Khalaf, N., &Salman, M. 2012. Inhibiting tomatoes gray mold (Botrytis cinerea) postharvest disease using biological control. In: *The 7the Scientific Agricultural Conference. Faculty of Agriculture*. Jordan University of Science and Technology, 8-10 October.

Abu-Khalaf, N. 2012. Sensors and monitoring technologies for water quality. In: *Conference of Water Crises and Agricultural Development in Palestine.* Palestine Technical University-Kadoorie, Tulkarm, Palestine, 21-22 May.

Abu-Khalaf, N., & Iversen, J. J. L. 2007. Electronic tongue and odour sensing. In: *Proceeding of the: Innovation via Nanotechnology.* University of Southern Denmark, Soanderborg, Denmark, 24 January.

Tubbert, G., Ogendahl, M., Abu-Khalaf, N., Ivar, L., Hansen, T. H., Dahl, P., Iversen, J. J. L., Takai, H., & Condra, T. J. 2006. Design and development of purification unit for odour control in livestock buildings. In: *Proceeding of the second International Conference on Environmental Science and Technology*. Greenspoint Wyndham Hotel, Houston, USA, 19-22 August.

Abu-Khalaf, N. 2005. Near Infrared technology and multivariate data analysis for sensing taste attributes of fruits and vegetables. In: *1st European user meeting on multivariate data analysis*. Frankfurt, Germany, 28-29 April, pp. 22.

Abu-Khalaf, N., & Bennedsen, B. S. 2001. Sensing the taste of fruits using near infrared (NIR) technology. In: *International conference: Physical Methods in Agriculture: Approach to Precision and Quality*. Prague, Czech Republic, 27-30 August, pp. 33-36.

Abu-Khalaf, N. 1998. Performance test of the boom sprayer with different types of nozzles. In: *Proceeding of the second international symposium on farm mechanization for developing countries*. Tsukuba, Japan, 5-6 November, pp. 133-150.

-Refereed book chapter:

Abu-Khalaf, N., & Bennedsen, B. S. 2002. Sensing taste attributes of plums using NIR reflectance spectroscopy. In: *Physical methods in agriculture- approach to Precision and Quality*. Vol. 1. Edited by: Blahovec, J., and Kutelek M., Kluwer Academic, pp. 429-439.

-Master thesis supervision:

1. "Studying the possibility of indirect microorganisms' metabolite classification using electronic tongue and multivariate data analysis", for M.Sc. student: Basima Ali Abu Rumaila, who defended her thesis on 09/1/2019 (The M.Sc. Defence Committee decision: As stands – the thesis is accepted in its present).
2. "Testing herbal medicines plants mixtures using a taste sensor "an electronic tongue" and multivariate data analysis", for M.Sc. student: Haneen Taha, who defended her thesis on 15/2/2019.
3. "Differentiation of Muscle Abnormalities in Turkey Breast Meat in Palestinian Market by Using VIS-NIR Spectroscopy", for M.Sc. student: Amal Zaid, who defended her thesis on 26/05/2019 (The M.Sc. Defence Committee decision: As stands – the thesis is accepted in its present).

4. "Sensing Botrytis cinerea in Tomato Using Visible/Near-Infrared (VIS/NIR) Spectroscopy", for M.Sc. student: Khadija Najjar, who defended her thesis on 10/06/2020 (The M.Sc. Defence Committee decision: As stands – the thesis is accepted in its present).

External Examiner:

1. "Effect of Vacuum Packaging Combined with Natural Additives on the Shelf Life and Quality Traits of Fresh Thyme" for student: Doa Kanana, Master in: Nutrition and Food Technology, An Najah University, on 08/12/2019.
2. "Effects of plant natural substances as an edible coasting in combination with calcium chloride post-harvest treatments on physico-chemical properties change in tomato Solanum lycopersicum L. fruits during storage" for student: Fayez Sweiti, Master in: Plant Production, An Najah University, on 23/12/2019.
3. "Studying Olive Oils' Quality Using Chemical Sensors" for student: Muhammad Jawabrih, Master in: Plant Production, An Najah University, on 24/7/2020.
4. "Evaluation of Palestinian consumer awareness to food safety and hygiene" for student: Tasneem Odeh, Master in: Nutrition and Food Technology, An Najah University, on 04/10/2020.
5. "Effect of vacuum packaging combined with natural additives and freezing on the shelf life and quality traits of fresh thyme" for student: Wafa Isleem, Master in: Nutrition and Food Technology, An Najah University, on 12/10/2021.

Fellowships and training courses:

- Carrying out a research project titled: Sensors in water quality, in Palestinian-Dutch Academic Cooperation Program on Water (PADUCO-I) for two years (2015-2017).
- Country Management Team (CMT) member representative of Palestine Technical University – Kadoorie (PTUK) in Palestinian-Dutch Academic Cooperation Program on Water (PADUCO-II) for five years (2015-2020).
- Participation in "Needs assessment workshop" in "Research Output Management through Open Access Institutional Repositories in Palestinian Higher Education (ROMOR)", Erasmus + project, Ramallah – Palestine, 3rd. April 2017.
- Palestinian-German Science Bridge (PGSB) fellowship, a research visit to Julich Research Center 28/10-9/11/2017.
- Participation in "From strategy awareness to strategic planning" training course in "PAAC: Palestinian Academic & Agribusiness cooperation, NICHE-PAA-23 in The Netherlands on 22-26 January 2018.
- Participated in Palestinian Germany Science Cooperation (PALGER), which is Palestine German Collaboration Agreement (BMBF call PALGER2015), for a joint project (for two years): `Mobility project for the establishment of joint research partnerships for introducing precision farming to the Palestinian Territories. And research visit to University of Hohenheim, Institute of Agricultural Engineering between 1-14/7/2018.
- Participation in "Strengthing capacity for sustainable innovation process, including marketing responsiveness of higher education & training to the needs of food & agribusiness and rular development sectors in Palestine" training course, NICHE-PAA-23 in The Netherlands on 24-29 September 2018.
- Participation in "Research Quality systems: Research Ethics & Institutional Review Board" training course, Norte Dame University, in Palestine on 13-14 October 2018.
- Participation in "Research Quality System's: Research Proposal" training course, Norte Dame University, in Palestine on 20-22October 2018.
- Fellowships and financial support were obtained twice (2017-2018 and 2018-2019) from the Dutch Nuffic through NICHE-PAA-233 project.
- Attending 6 hours training course of: "Academic Writing and Publishing" at King Khaled University, Saudi Arabia on 10-11 June, 2020.
- International Program Committee Member in The 6th International Conference on Sensors and Electronic Instrumentation Advances (SEIA 2020), Porto, Portugal on 23-25 September 2020.

- Scientific/organizing committee member in The 8th International Conference on Agriculture 2021 (AGRICO 2021).
- Technical and Scientific committee member in Arab Food Safety Summit 2021 (AFSS 2021).
- A country partner in Arab Food Safety Summit 2021 (AFSS 2021).
- A member in the "Innovations in Water Education Programs: Enhancing Water Security and Socio-economic Development in the Eastern Mediterranean under Climate Change / WaSec" Erasmus+ project, 11/2018-11/2021.
- A member in the "Palestinian Academic Council" from 2017-present.
- A member in the "PhD holder employees in Palestine" from 2020-present.
- A member in a SENSORFINT project: Non-destructive Spectroscopic Sensors (NDSS), such as NIR Spectroscopy, Fluorescence, Raman or Hyperspectral imaging, enable rapid, non-destructive and environmentally safe assessment of multiple parameters in a variety of food products. Which is funded by: COST (European Cooperation in Science and Technology). Project period: 30/09/2020 to 29/09/2024.

Reviewer:

- Palestine Technical University – Kadoorie Research Journal (PTUKRJ).
- Computer and Electronics in Agriculture Journal (Elsevier).
- Foods (Switzerland), MDPI.
- Journal of Agricultural Science and Technology A & B.
- Biosystem Engineering Journal (Elsevier).
- Chemistry Central Journal (Springer).
- Mediterranean Journal of Chemistry.
- Agricultural Mechanization in Asia, Africa, and Latin America (AMA) Journal.
- Bioscience and Bioengineering / American Institute of Science.

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