



Curriculum vitae



**Asst. Prof. DR. Yousif Yakoub Hilal Al –
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Education

	DEGREE OBTAINED	Graduation year	AVERAGE	University
1-	PhD. Agricultural Mechanization and Automation	2019	97	Faculty of Engineering, Universiti Putra Malaysia. Malaysia
2-	M.Sc. Agricultural Mechanization	1997 2001	80.08	College of Agriculture University of Basra. Iraq
3-	B.Sc. In Agricultural Mechanization	1997	75.23	

Areas of Interest

- 1. Artificial neural network and genetic algorithm**
- 2. Agricultural Mechanization and Automation**
- 3. Agricultural Machinery Engineering**
- 4. Soil Tillage and Traction**
- 5. Precision Agriculture**

Professional Qualification/ Membership/ Affiliation

- 1- Member of the teaching Staff: Dept. of Agric. Mechanization, Iraq. since 2002 - to date.**
- 2- Member Council of the Department of Agricultural Machines and Equipment**
- 3- Member of the Agronomist Society - Iraq. since 1997- to date.**
- 4- Student Projects Committee since 2011- 2014.**
- 5- The representative of the teaching staff from 2002 - 2004**
- 6- Director of the Committee for the management of agricultural mechanization department student's examinations since 2003-2006.**
- 7- Responsible for the Tractor Maintenance Committee since 2002-2006.**
- 8- Director of internet unit in the college of Agriculture, Basra University since 2002 -2003.**
- 9- Research Follow-up Committee since 2009-2013**
- 10-Seminar Coordinator, Department of Agricultural Machinery and Equipment, College of Agriculture and Forestry, University of Mosul, Iraq 2010 -2013.**
- 11-Research Member, Guidance Center in the cultivation of Basra 2001 to 2006.**
- 12-Consultant in the South Refineries Company and Bin Majid Company, since 2002-2003**
- 13-Editorial member of the Scientific Journal of King Faisal University**
- 14-Good experience in using mathematical models related to predicting production and energy outputs such as (Neural networks, genetic algorithms)**
- 15-Good experience in using variable selection programs like Matlab and Delphi**
- 16-Good experience in using CROPWAT programs.**
- 17-Good experience in using Operations Simulator (OPSIM) software and Agricultural Production Systems Simulator (APSIM)**

- 18-Good experience in statistical analysis software: SPSS program, EXCEL Program, SAS Program, R program, STATA Program, SHAZAM Program: MINITAB Program, EVIEWS program
- 19-Good experience in using SWAP software that is the daily budget model for hydrological agricultural fields and ponds (wetlands, lakes, ponds, reservoirs).
- 20-Collect, analyze and interpret research data.
- 21-Analysis of the energy produced in the fields.
- 22-Establish a good working relationship with team members.
- 23-Verbal and written communication skills.
- 24-Biotechnology, alternative energy and environmental monitoring.
- 25-Good experience in using drones in controlling and pesticide field crops
- 26-Good experience in developing palm oil production.

Appointment

1. Promoted to Asst. prof. 2021
2. Member of the teaching Staff: Department of Agricultural Machines and Equipment, Iraq. since 2002 - to date.
3. Promoted to Lecturer 2010.
4. Promoted to Associate Lecturer 2002.
5. Appointed as Tutor 2001.

Publications

Journals

- 1- Hilal, Y. Y., Khessro, M. K., van Dam, J., & Mahdi, K. (2022). Automatic Water Control System and Environment Sensors in a Greenhouse. *Water*, 14(7), 1166.
[https://doi.org/ 10.3390/w14071166](https://doi.org/10.3390/w14071166)
- 2- Al-Slevani, S. S. A., Hilal, Y. Y., & Rafiq, M. H. (2022). An investigation of the amount of grain loss–using plant density and reel index of two popular brands of combine harvesters.
<https://doi.org/10.15159/ar.22.011>
- 3- Hilal, Y. Y., Yahya, A., Ismail, W. I. W., & Asha'ari, Z. H. (2020). Neural networks method in predicting oil palm FFB yields for the Peninsular States of Malaysia. *J. Oil Palm Res.*

- 4- Al-Rajabo, S., Hilal, Y. Y., & Rajab, R. H. (2021, February). Investigation on the application of subsoiler vibration to reduce the energy requirement. In IOP Conference Series: Earth and Environmental Science (Vol. 653, No. 1, p. 012040). IOP Publishing. DOI: 10.1088/1755-1315/653/1/012040
- 5- Hilal, Y. Y., Al-rajabo, S. A. J., & Dahham, G. A. The effects of vibrating wings subsoiler plow on driver's seat of agricultural tractors and mechanization performance. *Soil and Tillage Research*, 205, 104806. <https://doi.org/10.1016/j.still.2020.104806>
- 6- [Yousif Y. Hilal, Raqeeb Hummadi Rajab, Arkan M. A. Seddiq. Plural genetic algorithms approach to control agricultural mechanization and wheat production. *Journal of Mechanical Engineering Research and Developments*,43\(5\), \(2020\).](#)
- 7- [Yousif Y. Hilal, Azmi Yahya, Wan Ishak, and Zulfa H. Asha'ari. Genetic Algorithms and Artificial Neural Networks for Optimization Palm Oil Production Models Based on Various Parameters. *The Scientific Journal of King Faisal University*, Volume \(Online First\), Issue \(Online First\) \(2020\).](#)
- 8- [Yousif Y. Hilal, Azmi Yahya, Wan Ishak, and Zulfa H. Asha'ari. Forecasting Oil Palm Production Based on a Nonlinear Autoregressive Exogenous \(NARX\) Neural Network Model. *The Planter, Kuala Lumpur*, 95 \(1125\): 100-116 \(2019\).](#)
- 9- [Yousif Y. Hilal, Wan Ishak, Azmi Yahya, and Zulfa H. Asha'ari. "Development of genetic algorithm for optimization of yield models in oil palm production." *Chilean journal of agricultural research* 78, no. 2 \(2018\): 228-237.](#)
- 10- [Adel, A. Abdullah, and Hilal, Yousif Y \(2017\). Effect of The Distances Between Subsoiler Plow Tines Bilateral and Penetration Angles On Some Performance Indicators Field. *Mesopotamia J. of Agri.*, 45\(1\):273-286.](#)
- 11- [Yousif Y. Hilal, W. Wan Ishak, Azmi Yahya and Zulfa H. Asha'ari, 2016. An Artificial Neural Network with Stepwise Method for Modeling and Simulation of Oil Palm Productivity Based on Various](#)

Parameters in Sarawak. Research Journal of Applied Sciences, Engineering and Technology, 13(9): 730-740.

- 12-Yousif Y. Hilal (2012) Effect of vibrated wings subsoiler plow in some physical & mechanical of the soil. Journal of Soil Science- Edition of Conference of Agricultural Machinery and Equipment, 2012.
- 13-Yousif Y. Hilal (2010). Subsoiler Plow Test (Single & Double Tine) Through Using Different Forward Speed by Some Field Performance Indicators. Mesopotamia J. of Agri., 38(2).
- 14-Yousif Y. Hilal (2007). The effect of subsoiler (double tines) plow on some physical and mechcal properties for silty clay soil. Journal of Basrah Researches (Sciences), 33(1).
- 15-Yousif Y. Hilal (2007). Evaluation of some parameters of subsoiler (double tines) plow performance in clay silty soil. Mesopotamia J. of Agri., 35(1).
- 16-Yousif Y. Hilal (2004). The effect of lifting angle of the subsoiler foot wings on its field performance in heavy soils. Iraqi J.Agric.9(3).
- 17-Yousif Y. Hilal (2001 a). The effect of wings width on the field performance of the subsoiler in heavy soil the specific resistance and energy utilization efficiency, Basrah J. of Agri. Sci.,14(1).
- 18-Yousif Y. Hilal (2001b). The effect of wings width on the field performance of the subsoiler the draft force and disturbed Area. Basrah J. of Agr. Sci., 14 (2).

Conference Proceedings

- 1- The 2nd International Conference on Sustainable Agriculture for Rural Development 2020 (2nd ICSARD 2020) Faculty of Agriculture - Jenderal Soedirman University, Indonesia.
- 2- The 2nd Al-Noor International Conference for Science and Technology (2NICST 2020) Baku, Azerbaijan in 2020.
- 3- Conference of Agricultural Machinery and Equipment in 2012, Baghdad, Iraq.
- 4- Conference of Higher Studies in 2002, Basra, Iraq.

Certificates of Appreciation

- 1- Certificate of Appreciation and Participation from 2nd ICSARD 2020**
- 2- Certificate of Appreciation and Participation 2NICST2020**
- 3- Certificate of participation from the Agricultural Machinery and Machinery Conference in Baghdad 2012**
- 4- Certificate of participation from the Graduate Studies Conference, University of Basra, 2001**
- 5- Certificates of Appreciation and graduated from the American Institute ELS**
- 6- Certificates of appreciation and participation from Harvard Medical School**
- 7- Certificates of appreciation and participation by the World Health Organization**
- 8- Certificates of appreciation and participation from UPM University**
- 9- Certificates of Participation from IEEE Advancing Technology for Humanity**
- 10- Certificates of Participation from Edmodo**
- 11- Member of the Editorial Committee of the Scientific Journal of King Faisal University**
- 12- Certificate of Appreciation and Participation from INSTITUTE OF TROPICAL AGRICULTURE AND FOOD SECURITY (ITAFoS)**
- 13- Certificates of participation from the ministerial team supervising the development of e-learning**
- 14- Participation certificates from various colleges at the University of Mosul**
- 15- Certificates of passing the Computer Fundamentals Exam from the Computer Center - University of Mosul.**
- 16- Certificates of affiliation to several scientific platforms**
- 17- A certificate of appreciation and participation from the Nineveh Agriculture Directorate**
- 18- Certificate of Appreciation and Participation from the College of Computer Science and Mathematics at the University of Mosul**

19- More than 20 letters of thanks from the Minister of Higher Education and Scientific Research, the Presidency of the University of Mosul, the University of Basra and the Deanship of the College of Agriculture and Forestry, and from governmental and non-governmental institutions

Other Activities

- 1- Participation in a scientific cooperation and symposium at the Nineveh Agriculture Directorate 2020.**
- 2- The virtual scientific workshop titled "Climate Action for a Sustainable Environment the Million Tree Planting Project is an Iraqi Model," which was held in cooperation with the Administration of the One Million Tree Planting Project on Saturday May 9-2020.**
- 3- The virtual scientific workshop tagged "Experimental Modified Vaccines Used in Clinically Treating Coronavirus", which was held at the College of Agriculture and Forestry, in cooperation with basic sciences, on Tuesday May 5-2020.**
- 4- The virtual scientific workshop tagged "The possibility of using plant extracts as natural sterilizers" which was held at the College of Agriculture and Forestry on Tuesday, May 11-2020**
- 5- The virtual scientific workshop tagged "Using the Edmodo platform to conduct remote electronic exams" was held at the College of Computer Science and Mathematics on May 28-2020.**
- 6- The virtual scientific workshop titled "Methods of Facilitating Video Communication with Students within a Slow Internet Connection" was held at the College of Agriculture and Forestry on Monday 04/13-2020.**
- 7- Course: Accelerating Progress Toward Health-related Sustainable Development Goals, World Health Organization, on 20-03-2020.**
- 8- Seminar: "e-learning at Iraqi Universities (case study –II)", e-Learning in Iraqi Universities Project Ministerial Team, 24-March, 2020- Baghdad, Iraq.**
- 9- Seminar: "The National index for e-learning accreditation and the role for the academic staff at the Iraqi Universities", e-Learning in Iraqi Universities Project Ministerial Team, 30-March, 2020- Baghdad, Iraq.**
- 10-Seminar: "Current trends in e-learning implementation" e-learning in Iraqi Universities Project Ministerial Team, 1-April, 2020- Baghdad, Iraq.**
- 11-Training: Edmodo basics course (English) ,12-06-2020**

- 12-Training: COVID-19: Operational Planning Guidelines and COVID-19 Partners Platform to support country preparedness and response, World Health Organization, 20-03-2020.**
- 13-Training: Simulation Exercise Management: Introduction, Health emergencies programme, World Health Organization, 24-03-2020.**
- 14-Training: Severe Acute Respiratory Infection (SARI) Treatment Facility Design, Health emergencies programme, World Health Organization, 07-04-2020.**
- 15-Training: ICU Management of Coronavirus Patients, Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education, 11-04-2020.**
- 16-Training: COVID-19 Impact on Infection Control, Preparedness and Cancer Patients, Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education, 14-04-2020.**
- 17-Webinar: Search Strategies to Optimize Your Research Time, IEEE Xplore, 17-09-2020.**
- 18-MSc in Applied Mechatronics Engineering at Harper Adams University, UK. Faculty of Engineering, UPM, Malaysia. 4th January 2018.**
- 19-Sustainability, Challenges and Opportunities in Palm Oil Industry. Faculty of Engineering, UPM, Malaysia. 22nd March 2018.**
- 20-How to Successfully Publish in IEEE. Termasa Room, Perpustakaan Sultan Abdul Samad, UPM, Malaysia. 17th April 2018.**
- 21-Seminar: The Viva Voce. Auditorium Radin Umar, Faculty of Engineering, UPM, Malaysia. 25 April 2018.**
- 22-Seminar in Putra Graduate On Time "Key word Sequence Importance: Act as Graduate Proficient System (GPS) for Thesis and Publication" Date: 26 April 2018.**
- 23-Public lecture: "climate change on oil palm and vice versa "4 May 2018.**
- 24-Seminar: Energy-based functional modeling and its application for the simulation of electrical vehicle (EV) motor sound. in Dewan Seminar, Level 2, Faculty of Engineering, UPM, Malaysia. 10th August 2018.**
- 25-Seminar: How to Twist. Training Room 1, Block B, TIC III UPM-MTDC, UPM, Malaysia. 24 September 2018.**
- 26-International Workshop on Nano biotechnology for Food, Agriculture and Health (IWNFAH) .10-11th October, 2018.**
- 27-Seminar: Introduction to Thesis Writing. Main Lecture Hall, Faculty of Biotechnology and Bio Molecular Sciences, UPM. 26 October 2018.**

- 28-Seminar: Research Methodology (Quantitative). Auditorium Radin Umar, Faculty of Engineering, UPM. 30 October 2018.**
- 29-Seminar: Developing a Skilled Workforce for the Agricultural Value Chain. Auditorium, Faculty of Engineering, UPM. 12th November 2018.**
- 30-Seminar: Efficient Production of Bio-Based Chemicals. Dewan Kuliah 4, Faculty of Engineering, UPM, Malaysia. 6th March 2019.**
- 31-Seminar: Time Management. Auditorium Radin Umar, Faculty of Engineering, UPM, Malaysia. 7 March 2019.**
- 32-Seminar: GIS Based Analysis of Plastic Waste Leakage in Parts of Selangor State of Malaysia. Makmal Spatial 1 Faculty of Engineering Makmal Spatial 1 is the first lab on the left, across the road from Engineering Faculty dean Building, Malaysia. 19th March 2019.**
- 33-Seminar "Advanced technology in japans agriculture" in faculty of engineering 16 March 2017.**
- 34-Half day seminar on doing applied research using statistic 17 march 2017.**
- 35-Seminar in Putra Graduate On Time (GOT) "Time Management" 22 March 2017.**
- 36-Seminar in Putra Graduate On Time (GOT) "Introduction to thesis" 24 March 2017.**
- 37-Seminar in Putra Graduate On Time (GOT) "Research methodology (Quantitative) " 5 April 2017.**
- 38-Seminar in Putra Graduate On Time (GOT)" Introduction to thesis writing " ,11 April 2018.**
- 39-Seminar in Putra Graduate On Time (GOT)"The Thesis and The Viva Voce",12 April 2018.**
- 40-The workshop entitled: How to Successfully Publish in IEEE" 17 April 2018, Perpustakaan Sultan Abdul Samad (PSAS).**
- 41-Seminar in Putra Graduate On Time (GOT) "Manuscript writing and publication 21 April 2017.**
- 42-Seminar in Putra Graduate On Time" Viva voce "25 April 2018.**
- 43-Seminar in Putra Graduate On Time (GOT) "The Viva Voce " 27 April 2017.**
- 44-Journal writing workshop in university of Malay 9 may 2017.**

- 45-Seminar in Putra Graduate On Time "Research Methodology - Quantitative" 11 July 2017.**
- 46-Seminar in Putra Graduate On Time (GOT) "Demystifying Leadership" 25 July 2017, putra Sarjana school of graduate studies.**
- 47-Seminar in Putra Graduate On Time (GOT) "CARE in Science and the Writing of Quality Manuscripts", 21 August 2017, putra Sarjana school of graduate studies.**
- 48-Seminar in Putra Graduate On Time (GOT) "Saving Time in Thesis and Article Writing Strategy Using KSI Technique" , 11 October 2017.**
- 49-International seminar 'Research Proposal Writing for the Social Sciences' on 24 Feb 2016.**
- 50-International seminar "Element of the Thesis" on 15 March 2016.**
- 51-Workshop "Qualitative Research" 31 May 2016.**
- 52-Seminar in Putra Graduate On Time (GOT) "Negotiation Skills " 2 August 2016.**
- 53-Seminar in Putra Graduate On Time (GOT) "Publication in a scientific journal and literature review writing " 11 August 2016.**
- 54-Seminar in Putra Graduate On Time (GOT) "Time Management and Setting Monitoring Milestones" 28 September 2016.**
- 55-Seminar in Putra Graduate On Time (GOT) "Qualitative Research - Culture, Values and Practices: An Interpretive Perspective" 1 December 2016.**
- 56-Workshop in Putra Graduate On Time (GOT) "Time Management & Setting Monitoring Milestones and E.A.G.L.E. PhD Made Easy - Fundamentals towards G.O.T. in Innovative Research" 22 Sept 2016.**
- 57-Workshop "course training on genetic algorithm in rachis systems" 1 November 2016.**
- 58-Seminar in Putra Graduate On Time (GOT) "The Viva Voce" 24 November 2016.**
- 59-Presentation of Ph.D. Student for The Purposes of Discussion.**
- 60-Seminar on Research Best Practices: Skills versus Tools on 29th September 2015.**
- 61-Seminar Pembentangan Kertas Kerja Bagi Pegawai Akademik Fakulti Kejuruteraan-30 September 2015.**

- 62-Training on Strategic Scientific Modeling on 17 - 18 November 2015.**
- 63-Giving lectures in the Guidance Center in the cultivation of Basrah.**
- 64-Lectures about using of solar energy in agricultural operations.**
- 65-Lectures about using of solar energy in drying agricultural crops.**
- 66-Lectures about using of wind and solar energy in the operation of irrigation systems.**
- 67-Lectures about cycles of Agricultural development (Planters).**
- 68-A member of the Commission on the import of scientific equipment of the Department of agricultural mechanization.**
- 69-Educational supervision for student's stage first of the Department of agricultural Mechanization.**
- 70-Supervision of projects fourth grade students of the Department of Agricultural Mechanization since 2002 and so far.**