

## *PERSONAL INFORMATION*

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### **BIO DATA**

First Name: Abbas

Last Name: Akbarnia

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Father's Name: Kazem

Nationality: Iranian

Sex: Male

Date Of Birth: 16/7/1966

Place Of Birth: Abadan

Matial Status: Married

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### **Academic Degrees:**

Ph.D. In Mechanic of Biosystems. Tehran University, Tehran. Iran. 2007.

M.Sc. In Mechanic of Agricultural Machinery. Tarbiat Modarres University, Tehran. Iran. 1995.

B.Sc. In Agricultural Machinery. Tabriz University, Tabriz. 1990.

### **Job Experiences:**

1- Assistant director of Mechanic Institute,2018-now, Iranian Research Organization For Science and Technology (IROST).

2- Director of Agriculture Institute, 2006 to 2010 & 2011 to 2012, Iranian Research Organization For Science and Technology (IROST).

3- Member of scientific board,1999-now, Iranian Research Organization For Science and Technology (IROST).

4- Member of scientific board,1995-1999, Ahvaz University, Agricultural College.

**Research and Practical Experiences:**

- 1- Design, fabrication and evaluation of front mounted reaper, (IROST).
- 2- Design, fabrication and evaluation of wood-chipper machine, (IROST).
- 3- Design of soybean toaster machine, (IROST).
- 4- Design, fabrication and evaluation of olive-oil washing and extracting machines, (IROST).
- 5- Design of pick-up and chapper of cane machines.
- 6- Modification, fabrication and evaluation of agricultural combinat, (IROST).
- 7- Modification, fabrication and evaluation of wood-chipper machine, (IROST).
- 8- Modification, fabrication and evaluation of cold press.
- 9- Modification, fabrication and evaluation of sugar cane planter, (IROST).
- 10- Design of vegetable harvester machine.
- 11- Design of washing line of vegetable machines.
- 12- Design of seed-oil (cleaning, washing, drying, extracting and filtration) machines.
- 13- Design, fabrication and evaluation of Fluidized Bed machines, (IROST).
- 14- Design, fabrication and evaluation of Separator of waste products in the process of peeling sesame seeds machines, (IROST).
- 15- Design of Hydroponic crop system with rotary crop bed at horizon level equipped with reaper unit.

**Publication:**

- 1- **Abbas Akbarnia**, Khoshtaghaza H., Sharifi J., "Design and fabrication of wood-chipper machine", The Second National Iranian Congress for Horticultural Science, Sept. 2000. Karaj. Iran.
- 2- **Abbas Akbarnia**, Khoshtaghaza H., Sharifi J., Eraghi M. K., "Design, fabrication and evaluation of wood-chipper machine", Pajouhesh-va-Sazandegi In Horticulture and Agronomy, Scientific and research quarterly of Agricultural Jihad, No. 55, P. 2-8, Summer 2002.
- 3- **Abbas Akbarnia**, "Design and fabrication of front mounted reaper", The First International Wheat Congress, Dec. 2002. Karaj. Iran.

- 4- **Abbas Akbarnia**, "Design, fabrication and evaluation of front mounted reaper and compare with BCS reaper", The second student conference on Agricultural Engineering machinery, May 2005. Karaj- Iran.
- 5- **Abbas Akbarnia**, Mobli H., Akram A., Hamed M., Rafiei SH., "Determination and comparison of pressure strengths among four varieties of cultivated olive in Iran", Iranian Journal of Agricultural Science, Vol. 39, No. 2, P. 237-243, 2008.
- 6- **Abbas Akbarnia**, Tabatabaeifar A., Minaei S., Sharifi J., "Modification and evaluation of front mounted reaper", Journal of Agricultural Science, Vol. 18, No.4, P. 223-233, 2009.
- 7- **Abbas Akbarnia**, Mobli H., Akram A., Hamed M., Rafiei SH., "The effects of roller crusher speed and mixing temperature on quality and quantity of extracted olive oil, Roghany variety", Iranian Journal of Bio systems Engineering, Vol. 39, No. 1, P. 75-83, 2009.
- 8- **Abbas Akbarnia**, Mobli H., Akram A., Hamed M., Rafiei SH., "The effects of different mixing times and different temperatures of the mixing unit on some quality and quantity features of extracted olive oil Roghany varieties", Iranian Journal of Bio systems Engineering, Vol.40, No. 1, P. 9-14, 2009.
- 9- **Abbas Akbarnia**, "Comparison of Fuel Consumed with Two Methods of Soil Preparation and Seed Planting", The National Conference on Consumption Pattern Reforms in Agriculture and National Resources, Nov. 2009, Razi University, Kermanshah-Iran.
- 10- **Abbas Akbarnia**, "Modification, fabrication and evaluation of wood-chipper machine", The National Conference on Consumption Pattern Reforms in Agriculture and National Resources, Nov. 2009, Razi University, Kermanshah-Iran.
- 11- **Abbas Akbarnia**, "Modification, fabrication and evaluation of agricultural combinat", The National Conference on Consumption Pattern Reforms in Agriculture and National Resources, Nov. 2009, Razi University, Kermanshah-Iran.
- 12- Asghar Mohamadi, **Akbarnia A.**, Alimardani R., "Evaluate the effect of width in a winged share tillage tool", Proceeding of National Conference on Water, Soil, Plant Sciences and Agricultural Mechanization, March 2010, Islamic Azad University, Dezful-Iran.
- 13- **Abbas Akbarnia**, Borghaei M., Baharloeian Sh., "Comparison of Fuel (Energy) Consumed and Crop production of Two tillage systems", The 6st National Conference in Agri. Machinery Eng. & Mechanization, Sept. 2010, University College of Agriculture and Natural Resources, University of Tehran, Iran.
- 14- **Abbas Akbarnia**, Mobli H., Akram A., Hamed M., Rafiei SH., "The effects of ratio of water and temperature on olive paste in mixture unit on quality and quantity of extracted olive oil", J. Agric. Sci. Natur. Resour., Vol. 16, No. 8, P. 174-180, 2009. University College of Agriculture and Natural Resources, University of Gorgan, Iran.
- 15- **Abbas Akbarnia**, Alimardani R., Baharloeian Sh., "Performance Comparison of Three tillage systems in Wheat Farms", Australian journal of Crop Science", AJCS 4(8):586-589, 2010.

- 16-**Abbas Akbarnia**, Malekyarand M., "Comparison of Fuel (Energy) Consumed and Crop production of three tillage systems in barley Farms", The 1st National Conference in Agricultural Mechanization and Technologies, Feb. 2011, University College of Agriculture and Natural Resources, University of Ramin , Ahvaz-Iran.
- 17-Nasibeh Izadikhah, Mobli H., **Akbarnia A.**, Ahamadi H., Rafiei SH., "Effects of Rotary Speed, Mixing Temperature and Time on Quality and Quantity of Oil Extracted from Olives (Roughany) using a Hammer Crusher", Journal of Agricultural Engineering Research, Vol.12, No.1, P. 71-82, 2011.
- 18-**Abbas Akbarnia**, "The effect of screw shaft speed in a screw press on quality and quantity of extracted sesame oil", The 1st National Conference in Agricultural Science and Technologies, Sep. 2011. Zanzan University, Iran.
- 19-**Abbas Akbarnia**, "Comparison of Fuel (Energy) Consumed on Three tillage systems", The 7st National Conference in Agri. Machinery Eng. & Mechanization, Sept. 2012, University College of Agriculture and Natural Resources, University of Shiraz, Iran.
- 20-**Abbas Akbarnia**, "Modification, fabrication and evaluation of wood-chipper machine with rotating saw", The 7st National Conference in Agri. Machinery Eng. & Mechanization, Sept. 2012, University College of Agriculture and Natural Resources, University of Shiraz, Iran.
- 21-**Abbas Akbarnia**, Farhani F., "Effects of Screw Shaft Speed and Press Head Temperature on Quality and Quantity of Extracted Sesame Oil in a Rotating Screw Press Unit", The 2st National Conference in Food Security, Oct. 2012, Savadkooch Azad University, Iran.
- 22-Asghar Mohamadi, Alimardani R., Labafi R., **Akbarnia A.**, "Modeling of draft force of a winged share tillage tool using fuzzy inference system and multiple linear regression analysis", The 6st National Conference in Agri. Machinery Eng. & Mechanization, Sept. 2010, University College of Agriculture and Natural Resources, University of Tehran, Iran.
- 23-**Abbas Akbarnia**, Farhani F., "Study of fuel consumption in Three tillage methods", Journal of Research in Agricultural Engineering, Vol.12, No.1, P. 71-82, 2011.
- 24-Asghar Mohamadi, Alimardani R., **Akbarnia A.**, Akram A., "Modeling of draft force variation in a winged share tillage tool using fuzzy table look-up scheme", Agric Eng Int: CIGR Journal, Vol. 14, No 4, P. 262 -268, 2012.
- 25-**Abbas Akbarnia**, "Study of Fuel Consumed and Crop Yield of Three tillage methods in Barley Farms", Journal of plant production, Vol. 20, No.1, P. 203-210. 2013. Gorgan University-Iran.
- 26-**Abbas Akbarnia**, Farhani F., Heidary B., "Modification, fabrication and evaluation of a multi-task machine", The 7st students Conference on Mechanical Engineering, Feb. 2013. University of Tehran, Iran.
- 27-Morteza Malekyarand, **Akbarnia A.**, Dezfouli A. M., "Development of interdisciplinary bunches a new horizon in Employment of agricultural Graduates", The first National Conference on Employment of Graduates in Agricultural Sector and National Resources, Nov. 2011. University of Tarbiat Moddares, Iran.

- 28-Asghar Mohamadi, **Akbarnia A.**, Labafi R., "Study of effect of tool geometry on soil failure and the applied forces, and carrying out a case study", National Conference Applied research in science and Engineering, April 2012. Takestan Azad University-Iran.
- 29- **Abbas Akbarnia**, Farhani F., Heidary B., "Economic comparison of tillage and planting operations in three tillage systems", Agric Eng Int: CIGR Journal, Vol 15, No 4, P. 180-184, 2013.
- 30-**Abbas Akbarnia**, Moaveni P., Ghorbankhani A., "Design and Fabrication of Sugar Cane Planter Model", National Conference Modern Topic in Agriculture, May 2014. Azad University, Tehran-Iran.
- 31-**Abbas Akbarnia**, Farhani F., Malekyarand M., "Multi-task Machine for Reduction of Energy Consumption in Tillage and Seeding Operation", The Third international conference "Emerging Trends in Energy Conservation", March 2014. University of Tehran-Iran.
- 32-**Abbas Akbarnia**, Farhani F., "Wood-chipper machine for reused of wood remains from cut and trimmed of trees", The Third international conference "Emerging Trends in Energy Conservation", March 2014. University of Tehran-Iran.
- 33- **Abbas Akbarnia**, Mohamadi A., Farhani F., Alimardani R., "Simulation of draft force of winged share tillage tool using artificial neural network model", Agric Eng Int: CIGR Journal, Vol 16, No 4, P. 57-65. Dec. 2014.
- 34- **Abbas Akbarnia**, Farhani F., Alimadadi A., "Planting Machine Equipped with Compound Widthwise Seeding Unit for use in Sugarcane Farms", The first international conference on "New Findings of Agricultural Sciences, Natural Resources and Environment", March 2015. Tehran-Iran.
- 35-**Abbas Akbarnia**, Moaveni P., "The effects of shaft screw speed and press head temperature on quality and quantity of extracted sesame oil in screw press unit", International Conference on Applied Research in Agriculture (ICARA), June 2015. Tehran-Iran.
- 36-**Abbas Akbarnia**, Moaveni P., Mobli H., "Design and fabrication of decanter and olive-oil extracting machinery", International Conference on Applied Research in Agriculture (ICARA), June 2015. Tehran-Iran.
- 37-**Abbas Akbarnia**, Moaveni P., "Establish of Widthwise Seeding Method instead of Lengthwise Seeding Method in Sugarcane Farms", International Conference on Applied Research in Agriculture (ICARA), June 2015. Tehran-Iran.
- 38- **Abbas Akbarnia**, "Construction and evaluation of a composite mosaic model with rotating cover", National Conference on Applied Research in Agriculture, June 2016, Azad University of Qods, Iran.
- 39- **Abbas Akbarnia**, "Designing and manufacturing of a fluid bed-winnow", National Congress of Medicinal Plants, August 2016, Azad University of Qods, Iran.

- 40- **Abbas Akbarnia**, “Design and construction of a laboratory model for cutting scaffolds (transverse) for use in sugarcane”, *Journal of Agricultural Machinery of Ferdowsi University of Mashhad*. Volume 7, pp. 321-312, 2016.
- 41- **Abbas Akbarnia**, “Construction and evaluation of vertical rotary separator”, *National Conference on Applied Research in Science and Engineering*, Aug. 2017, institutions of Iqbal lahori-Iran.
- 42- **Abbas Akbarnia**, “The effect of rotational speed and cylinder radius on the quality of sesame oil refining in a rotary separator” *Contemporary Iranian Technology Congress*, August 2017, Mehr Education Institution, Tehran-Iran.
- 43- **Abbas Akbarnia**, Younessi S., Jafarkhanei M., “Construction and evaluation of a customizable unit of seed separator for the fluid bed-winnow”.*International Conference on New Horizons of Natural Resources and the Environment*, Jan. 2016, Mehr Education Institution, Tehran-Iran.
- 44- **Abbas Akbarnia**, “ Investigating the Effect of Nutrition Channel Angle on the Performance of a Wood Chipper” *International Conference on Engineering, Environment and Sustainable Development*, May 2018, Shiraz-Iran.
- 45- **Abbas Akbarnia**, Shokrian A., “Manufacturing and production of semi-industrial rotary horse separator pump” *Conference on New Horizons of Natural Resources and the Environment*, Jan. 2016, Mehr Education Institution, Tehran-Iran.
- 46- **Abbas Akbarnia**, Rashvand M., “Evaluation of physiognomic, dynamical and aerodynamic properties of olive” *Conference on New Horizons of Natural Resources and the Environment*, Jan. 2016, Mehr Education Institution, Tehran-Iran.
- 47- **Abbas Akbarnia**, “Investigating the Effect of Fedding Channel Angle on the Performance of a Wood chipper Machine” at the 4th International Congress on Agricultural Engineering, Environment and Sustainable Development, June 2009, Shiraz-Iran.
- 48- **Abbas Akbarnia**, Rashvand M., “Design, fabrication and evaluation of horizontal rotary separator of olive oil (Three-Phase Decanter)”. *Agric Eng Int: CIGR Journal*, Vol. 21, No. 2, P. 180-187, July 2019.
- 49- **Abbas Akbarnia**, Rashvand M., “An Evaluation of physical, dynamic and aerodynamic properties of olive”, *Research in Agricultural Engineering (RAE Journal)*, 65(2): 48-55, 2019.
- 50- **Abbas Akbarnia**, Rashvand M., “Fabrication and evaluation of Rotary Separator of Sesame Oil” *International Journal of Food Science and Biotechnology*, 3(3): 77-82, 2018.
- 51- Ashkan Shokrian, Mobli H, **Akbarnia A**, Jafari A, Mousazade H, Zhu B., “Application an Euler–Euler Multiphase-Flow Model for Simulation Flow in a Centrifugal Separator Machine” *American Journal of Fluid Dynamics*, 8(4): 112-115, 2018.
- 52- **Abbas Akbarnia**, Rashvand M., “Fabrication and Evaluation of Continuous Press Machine for Extracting Sesame Oil using artificial intelligence techniques” *Fourth International Conference on New Findings in Agricultural Science, Natural Resources and the Environment*, Aug 97.

- 53- **Abbas Akbarnia**, Rashvand M., “A Review of Extraction of sesame Oil in the industry”. Conference on New Findings in Agricultural Science, Natural Resources and the Environment, Aug 97.
- 54- **Abbas Akbarnia**, Hajizadeh Namin A., “The effect of angular velocity and radius of the cylinder on the quality of refined sesame oil in centrifuge separator” The 4th Annual International Congress on Agricultural Development, Natural Resources and Environment and Tourism of Iran, Feb 97.
- 55- **Abbas Akbarnia**, Rashvand M., “Design and Optimization of Press Machine in Order to Produce Sesame Oil” American Journal of Mechanics and Applications, 6(4): 68-74, 2018.
- 56- **Abbas Akbarnia**, Rashvand M., “Effect of temperature, water content and velocity on the quality of virgin olive oil extracted through three-phase centrifuge” AIMS Agriculture and Food, 4(1): 165–176, 2019.
- 57- **Abbas Akbarnia**, Rashvand M., “The feasibility of using image processing and artificial neural network for detecting the adulteration of sesame oil” AIMS Agriculture and Food, 4(2): 237–243, 2019.
- 58- Ashkan Shokriani, Mobli H., **Akbarnia A.**, Jafari A., Mousazade H., Zhu B., “A study on the Three-Phase Separator Machine (Tricanter) for Olive Oil Extraction”, Journal of Theoretical and Applied Mechanics, 49: 233-240, 2019.
- 59- **Abbas Akbarnia**, Rashvand M., “Fabrication and Evaluation of Continuous Press Machine for Extracting Sesame Oil using artificial intelligence techniques”, International Commission of Agricultural and Biosystems Engineering (CIGR Journal), **Accepted, 2019.**
- 60- Rashvand M., Javanmard M., **Abbas akbarnia**, Sarami Sh., “Fusion of dielectric technique and intelligence methods in order to predict acidity and peroxide of virgin olive oil”, Int. J. Postharvest Technology and Innovation, Vol. 6, No. 3, 192-202., 2019.
- 61- **Abbas Akbarnia**, Rashvand M., “Spiral Conveyor stress Analysis in Centrifugal Machines”, 3<sup>rd</sup>. International conference on electrical engineering, mechanical engineering and computer ‘18 sep. ‘2019.
- 62- **Abbas Akbarnia**, Rashvand M., “A Review of Novel Techniques for Olive Oil Authentication”, 3<sup>rd</sup>. International conference on electrical engineering, mechanical engineering and computer ‘18 sep. ‘2019.
- 63- Mohsen SHahabi, Ozgoli H.A., **Abbas AKbarnia**, “Modeling and Investigation of Gas Turbines Heat Recovery in the Semnan Oil Pumping Station for Heating Gas-Oil to Reduce Energy Consumption of pumping”, Journal of Energy Management and Technology (JEMT) Vol. 4, Issue 4, 21-27. 2020.
- 64- Abbas Akbarnia, "Analysis of dynamic and aerodynamic properties of olives", Alborz Technology, Scientific, Research Journal. Pp. 30-36, No. 19, 6th year, autumn 2020.
- 65- Mahmoud Omid, Akbarnia A., "A Review of New Methods in Detection of Olive Oil Fraud", Alborz Technology, Scientific, Research Journal. Pp. 37-45, No. 19, 6th year, autumn 2020.

- 66- Abbas Akbarnia, hajizadeh Namin A., “Review of different drying methods and presenting a new method for drying crops” International Conference on Emerging Trends in Engineering, Science and Technology Feb 16-18, 2020 | Bilkent University – Ankara.
- 67- Abbas Akbarnia, hajizadeh Namin A., Taherkhani A. & Najmi M., “Design and construction of a winnowing machine equipped with a floating bed” "7th International Conference on Agricultural Science, Environment, Urban and Rural Development" in the Georgia in March, 2021.
- 68- Mahdi Rashvand, Abbas Akbarnia, Rouzbeh Abbaszadeh, Davoud Karimi and Ali Jafari, “Measurement bruise volume of olive during impact test using FEM and quality evaluation of extracted olive oil”, Journal of Food Science & Nutrition, Food Sci Nutr. 2021;00:1–16. DOI: 10.1002/fsn3.2508

**Certificates and Awards:**

- 1- Patent certificate from the *Iranian Patent Office* for “Design and fabrication of a front mounted reaper swather.
- 2- Patent certificate from the *Iranian Patent Office*, and certificate of merit from *National Conference on Reforms in Patterns of Consumption in Agriculture and Natural Resources*, and winner of third prize from *Iranian Elite Foundation*, for “Design, fabrication and evaluation of a wood-chipper machine with rotating saw”.
- 3- Patent certificate from the *Iranian Patent Office* for “Design, fabrication and evaluation of a Multi task Machine”.
- 4- Patent certificate from the *Iranian Patent Office* for “olive-oil extracting machinery”,
- 5- Patent certificate from the *Iranian Patent Office* for “Centrifugal pump”,
- 6- Patent certificate from the *Iranian Patent Office* for “Cold press unite”,
- 7- Patent certificate from the *Iranian Patent Office* for “Compound Widthwise Seeding Unit for Sugar Cane Planter”.
- 8- Industrial Certification for Rotary Pump (Centrifuge).
- 9- Member of the expert of the Agricultural and Natural Resources Engineering Organization of the country with a privileged rank (engineering system number 0709023529).
- 10- Industrial Certification for Conveyor Continuous Press Machine with Parallel House and obtaining Scientific Approval of Iranian Research Organization for Science and Technology 1391.
- 11- Industrial Certification for the Sugarcane Complex Component and Acknowledgment of Iranian Research Organization for Science and Technology (IROST)1393.



- 12- Industrial certification related to the method and the fire fighting system of forests and rangelands using a dilute mixture of water and soil of the fire place and obtaining scientific approval of Iranian Research Organization for Science and Technology (IROST).
- 13- Industrial Certification for Plant winnow with Fluid bed and obtaining Scientific Approval of Iranian Research Organization for Science and Technology (IROST) 1397.
- 14- Industrial Certification for Vertical Rotary Separator (Decantor) with Shell Container for Sesame Oil Treatment and obtaining Scientific Approval of Iranian Research Organization for Science and Technology (IROST) 1397.
- 15- Industrial certification regarding the method and the skin separator from sesame seeds using abrasive surfaces of rotary cylindrical lathe and obtaining scientific confirmation from the Iranian Research Organization for Science and Technology (IROST) 1397.
- 16- Industrial certification regarding to the collection, and burial straw and obtaining scientific confirmation from the Iranian Research Organization for Science and Technology (IROST) 1397.