Vali Rasooli Sharabiani

Professor

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University of Mohaghegh Ardabili, Ardabil, Iran..

RESEARCH INTEREST

My research interest is in the field of **Precision Agriculture**.

Nowadays, the increase in the world's population and the need to produce more foods and the reduction of agricultural inputs such as water and soil resources on the other hand, as well as the protection of the environment and increasing productivity, show the necessity of using new agricultural systems. Using **precision agriculture** and its tools is one of the best answers to the above problems. I have researched and taught resources management in agriculture, such as agricultural mechanization, for many years as a lecturer in the University of Mohaghegh Ardabili, Ardabil, Iran. However in the next stage, due to my interest in the topic of **precision agriculture**, I have completed a doctoral course in the one of the most prestigious laboratories of Hokkaido University in Japan. My achievement from this course has been a deeper familiarity with the concept of **precision agriculture**, **smart agriculture**, **variable rate technology**, the use of various sensors and **remote sensing methods** in agriculture, as well as the analysis of data (**Data Mining**) from these methods using **multivariate analysis** and **artificial intelligence**. Based on these fields of education and studies, I am interested in continuing to study and research in the field of **precision agriculture** and **non-destructive measurement methods** for developing new technologies in plants production and food processing.

EDUCATION

Doctor of Philosophy(Ph.D.) in Agricultural Engineering (Precision Agriculture)   (Sep. 2009-Sep. 2013)

Hokkaido University, Sapporo, Hokkaido, JAPAN

Thesis Topic: Development of a Real-time Optical Sensor for Detecting Wheat Growth Status

Thesis Details: My PhD Thesis was about **Variable Rate Technolgy** in **Precision Agriculture**.

In the process of producing agricultural products, it is important to detect timely the amount of fertilizer required by the plant to increase yield and reduce the use of chemical fertilizers to prevent environmental damages. In this research, a system for monitoring the growth statuse of wheat plants was designed to real-time detection the amount of available nitrogen concentration by an optical sensor. And as a result of detecting the amount of plant nitrogen deficiency, an algorithm and an electronic control unit (ECU) were developed for online control of the fertilizer spreader behind of the tractor that it called Variable Rate Technology (VRT) in Precision Agriculture (PA).

Supervisor: Prof. Noboru Noguchi (Hokkaido University, Japan)

1. [Laboratory of Vehicle Robotics 1](#), [Laboratory of Vehicle Robotics 2](#)
2. [Researchmap(Noboru Noguchi)](#)

GPA: AA/AA

Outcome :
3 Journal Papers (1 ISI and 2 Scopus)

1. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 2014. *Significant Wavelengths for Prediction of winter wheat growth status and grain yield Using Multivariate Analysis*. Engineering in Agriculture, Environment and Food. 7 .14-21. Scopus-Q3
2. **Vali Rasooli Sharabian**, Noboru Noguchi, Issei Han-ya, Kazunobu Ishii. 2013. *Evaluation of an Active Remote Sensor for Monitoring Winter Wheat Growth Status*. Journal of Engineering in Agriculture, Environment and Food (EAEF). 6(3): 118-127. Scopus-Q3
3. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 2013. *Optimal Vegetation Indices for Winter Wheat Growth Status Biased on Multi Spectral Reflectance*. Environ. Control Biol., 51 (3), 105-112. DOI: 10.2525/ecb.51.105. ISI, Scopus-Q3

And: 6 conference papers (5 international confrences and 1 national conference)

1. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 2013. *Prediction of winter wheat growth status and grain yield Using Partial Least Square Regression*. Proceedings of the 5th Asian Conference on Precision Agriculture (ACPA) June 25-28, Jeju, South Korea.
2. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 2012. *Appropriate Wavelengths for Winter Wheat Growth Status Based on Multi Spectral Reflectance Data*. 11th International Conference on Precision Agriculture (ICPA), 15-18 July, Indianapolis, Indiana USA.
3. **Vali Rasooli Sharabian**, Noboru Noguchi, Issei Han-ya, Kazunobu Ishii. 2012. *Investigation of Active Plant Nutrition Sensor in the Winter Wheat*. Dynamics and Control in Agriculture and Food Processing (IFAC). 13-16 June, Plovdiv, Bulgaria.
4. **Vali Rasooli Sharabian**, Issei Han-ya, Keisuke Hara, Kazunobu Ishii, Noboru Noguchi. 2011. Monitoring Winter Wheat Growth Using Plant Nutrition Active Sensor. Proceedings of the 4th Asian Conference on Precision Agriculture, Obihiro, Japan, July 4 to 7.
5. **Vali Rasooli Sharabian**, Issei Han-ya, Keisuke Hara, Kazunobu Ishii, Noboru Noguchi. 2011. *Monitoring and Estimation Winter Wheat Growth Using Remote Sensing*. Annual Meeting of Japanese Society for Agricultural, Biological, and Environment Engineering and Scientists (JSABEES), 6-8 September. Sapporo, Japan.
6. Issei Han-ya, Kazunobu Ishii, **Vali Rasooli Sharabian**, Keisuke Hara, Noboru Noguchi. 2011. *Development of Variable Rate Fertilization System using Plant Nutrition Sensor*. Proceedings of the 4th Asian Conference on Precision Agriculture Obihiro, Japan, July 4 to 7.

Master of Science(M.Sc.) in Agricultural Mechanization   (Sep. 1999- March 2001)

Shahid Chamran University, Ahwaz, IRAN.

Thesis Topic: Evaluating present agricultural mechanization situation and presenting development guidelines for the SARAB County, IRAN

Supervisors: Prof. Morteza Almasi and Prof. Iraj Ranjbar

GPA: 17.71 out of 20

Bachelor of Science(B.Sc.) in Agricultural Machinery   (Sep. 1995- Jul. 1999)

University of Tabriz, Tabriz, IRAN

GPA: 16.33 out of 20

ACADEMIC EXPERIENCE

Professor   (Sep. 2023-present)
Department of Biosystem Engineering, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran.

Associate Professor   (April 2019-Sep. 2023)
Department of Biosystem Engineering, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran.

Assistant Professor   (Sep. 2013-April 2019)
Department of Biosystem Engineering, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran.

Lecturer   (Sep. 2001-Sep. 2013)
Department of Biosystem Engineering, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran.

Responsibilities:

I have been a lecturer and researcher in university of Mohaghegh Ardabili since 2001. I am teaching in B. Sc, M. Sc and PhD cources. Howere I used to research in files of Agricultural Mechanization, Precision Agriculture and Non-destructive measurement Methods for post harvest and foods quality.

PROFESSIONAL EXPERIENCE

University of Mohaghegh Ardabili, Ardabil

- Adviser to the university president   (2023-Present)
- Member of the University's Council   (2023-Present)
- Member of University planning and development committee   (2022-Present)
- Vice-chancellor for Administration and Finance   (2016-2017)
- Vice-Chancellor for Students Affairs   (2014-2016)
- Director of the Information Technology and Communication Center   (2013-2014)
- Director of Sport and Cultural Activities   (2003-2005)
- Head of the Department of Agricultural Machinery(Biosystem Engineering) (2001-2003)
- Member of the University's Council   (2014-2017)
- Member of the University Board   (2014-2017)

SCHOLARSHIPS AND GRANTS

1. I was awarded an Iranian Scholarship from Ministry of Sciences, Researches and Technology to study PhD cource is Japan from (2009-2013) including 2800 USD/Month and Tuition fees

INTERNATIONAL COLLABORATION

1. E-Nose as a Non-destructive and Fast Method for Identification and Classification of Coffee Beans Based on Soft Computing Models. (https://doi.org/10.1016/j.snb.2023.134229). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland)**, Agata Dziwulska-Hunek** (University of Life Sciences in Lublin, Poland)**, 2023.**

2. Non-destructive test to detect adulteration of rice using gas sensors coupled with chemometrics methods. (https://doi.org/10.31545/intagr/166009). **Jesús Lozano** (University of Extremadura, Spain)**, Marek Gancarz** (University of Agriculture in Kraków, Poland)**, 2023**

3. Non-destructive method for identification and classification of varieties and quality of coffee beans based on soft computing models using VIS/NIR spectroscopy. (https://doi.org/10.1007/s00217-023-04240-x). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland)**. 2023.**

4. Use of a Convolutional Neural Network for Predicting Fuel Consumption of an Agricultural Tractor. (https://doi.org/10.3390/resources12040046). **José Luis Hernández-Hernández** (Chilpancingo Institute of Technology, Mexico)**, José Antonio Montero-alverde** (Acapulco Institute of Technology, Mexico)**, Mario Hernández-Hernández** (Chilpancingo Institute of Technology, Mexico)**. 2023**.

5. Investigating Changes in pH and Soluble Solids Content of Potato during the Storage by Electronic Nose and Vis/NIR Spectroscopy. (https://doi.org/10.3390/foods11244077). **Jesús Lozano (** University of Extremadura, Spain)**, Marek Gancarz (** University of Agriculture in Kraków, Poland)**. 2022.**

6. Prediction compost criteria of organic wastes with Biochar additive in in-vessel composting machine using ANFIS and ANN methods. (https://doi.org/10.1016/j.egyr.2023.01.001). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland)**. 2023.**

7. Prediction of winter wheat leaf chlorophyll content based on VIS/NIR spectroscopy using ANN and PLSR. (https://doi.org/10.1002/fsn3.3071). **Antoni Szumny** (Wroclaw University of Environmental and Life Sciences, Wrocław, Poland), **Adam Figiel** (Wroclaw University of Environmental and Life Sciences, Wrocław, Poland). **2022**.

8. Evaluation of Centrifugal Force, Erosion, Strain Rate, and Wall Shear in a Stairmand Cyclone. (https://doi.org/10.3390/pr10050994). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland), **Ryszard Kulig** (University of Life Sciences in Lublin, Poland). **2022.**

9. Hyperspectral imaging coupled with multivariate analysis and artificial intelligence to the classification of maize kernels. (https://doi.org/10.31545/intagr/147227). **Ambra Fioravanti** (National Research Council (STEMS-CNR), Italy), **Marek Gancarz** (University of Agriculture in Kraków, Poland), **Pavol Findura** (University of South Bohemia in České Budějovice, Czech Republic). **2022.**

10. Application of Artificial Neural Networks, Support Vector, Adaptive Neuro-Fuzzy Inference Systems for the Moisture Ratio of Parboiled Hulls. (https://doi.org/10.3390/app12041771). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland)**, Agata Dziwulska-Hunek** (University of Life Sciences in Lublin, Poland)**, 2022.**

11. A Comprehensive CFD Assessment of Wheat Flow in Wheat Conveying Cyclone Validation and Performance Analysis by Experimental Data. (https://doi.org/10.3390/pr10010001). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland)**.2022.**

12. Inner Properties Estimation of Gala Apple Using Spectral Data and Two Statistical and Artificial Intelligence Based Methods. (https://doi.org/10.3390/foods10122967). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland), **Sławomir Michałek** (University of Life Sciences in Lublin, Poland)**.2021.**

13. Estimation of moisture ratio for apple drying by convective and microwave methods using artificial neural network modeling. (https://doi.org/10.1038/s41598-021-88270-z). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland), **Wojciech Tanaś** (University of Life Sciences in Lublin, Poland)**.2021.**

14. Evaluation of DifferentModels for Non-Destructive Detection of Tomato Pesticide Residues Based on Near-Infrared Spectroscopy. (https://doi.org/10.3390/s21093032). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland), **2021.**

15. Feasibility of Using VIS/NIR Spectroscopy and Multivariate Analysis for Pesticide Residue Detection in Tomatoes. (https://doi.org/10.3390/pr9020196). **Mariusz Szymanek** (University of Life Sciences in Lublin, Poland), **Maciej Sprawka** (University of Life Sciences in Lublin, Poland)**.2021.**

16. Parboiled Paddy Drying with Different Dryers: Thermodynamic and Quality Properties, Mathematical Modeling Using ANNs Assessment. (https://doi.org/10.3390/foods9010086). **Antoni Szumny** (Wroclaw University of

Environmental and Life Science, Poland)**, Anil Kumar** (Delhi Technological University, India)**, Naoto Shimizu** (Hokkaido University, Japan)**.2020.**

17. Non-Destructive Prediction of Titratable Acidity and Taste Index Properties of Gala Apple Using Combination of Different Hybrids ANN and PLSR-Model Based Spectral Data. (https://doi.org/10.3390/plants9121718). **Mario Hernández-Hernández** (Autonomous University of Guerrero, Mexico)**, José Luis Hernández-Hernández** (TecNM/Technological Institute of Chilpancingo, Mexico)**.2020.**

RESEARCH PUBLICATION

Journal Papers:

1. Predicting Quality Properties of Pears during Storage Using Hyper Spectral Imaging System. **2023.** Ebrahim Taghinezhad, **Vali Rasooli Sharabiani**, Mohammadali Shahiri, Abdolmajid Moinfar, and Antoni Szumny. *Agriculture*, 13, 1913. (JCR-Q1, IF=3.6) https://doi.org/10.3390/agriculture13101913

2. E-Nose as a Non-destructive and Fast Method for Identification and Classification of Coffee Beans Based on Soft Computing Models. **2023**. Ehsan Aghdamifar, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad, Mariusz Szymanek, Agata Dziwulska-Hunek. *Sensors and Actuators B: Chemical*, V: 393, 134229. (JCR-Q1. IF=9.221) https://doi.org/10.1016/j.snb.2023.134229

3. Non-destructive method for identification and classification of varieties and quality of coffee beans based on soft computing models using VIS/NIR spectroscopy. **2023**. Ehsan Aghdamifar, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad, Adel Rezvanivand Fanaei, Mariusz Szymanek. *European Food Research and Technology*,V: 249, p: 1599–1612. (JCR-Q2. IF=3.498). https://doi.org/10.1007/s00217-023-04240-x

4. Determining nectarine cultivars using the spectroscopic method. **2023**. Ali Mirzazadeh, Ali Khorramifar, **Vali Rasooli Sharabiani**. *Journal of Environmental Science Studies*, 9: 1. (in Persian-ISC-Q2)

5. Non-destructive test to detect adulteration of rice using gas sensors coupled with chemometrics methods. **2023**. **Vali Rasooli Sharabiani**, Ali Khorramifar, Hamed Karami, Jesús Lozano, Sylwester Tabor, Yousef Darvishi, and Marek Gancarz. *Int. Agrophys*, 37, 235-244. (JCR-Q3. IF=1.627). https://doi.org/10.31545/intagr/166009

6. Maize seed variety classification using image processing. **2023**. Mansour Rasekh, Fariba Alimohammadi Sarab, Yousef Abbaspour-Gilandeh, **Vali Rasooli Sharabiani**, Amir Hossein Afkari-Sayyah, Hamed Karami. *Journal of Environmental Science Studies*, 8: 4. (in Persian-ISC-Q2)

7. Using Electronic Nose to Detect Potato Varieties using Chemometric Methods. **2023**. **Vali Rasooli Sharabiani**, Asma Kisalaei, Ali Khorramifar. *Journal of Environmental Science Studies*, 8: 4. (in Persian-ISC-Q2)

8. Prediction compost criteria of organic wastes with Biochar additive in in-vessel composting machine using ANFIS and ANN methods. **2023**. Roozbeh Abdi, Gholamhossein Shahgholi, **Vali Rasooli Sharabiani**, Adel Rezvanivand Fanaei, Mariusz Szymanek. *Energy Reports*, 9: 1684–1695. (JCR-Q2. IF=4.937). https://doi.org/10.1016/j.egyr.2023.01.001

9. Estimation of changes in potato acidity and SSC over time by spectroscopy. **2023**. **Vali Rasooli Sharabiani**, Ali Khorramifar, Asma Kisalaei. *Journal of Environmental Science Studies*, 8:4. (in Persian-ISC-Q2)

10. Prediction of winter wheat leaf chlorophyll content based on VIS/NIR spectroscopy using ANN and PLSR . **2023**. **Vali Rasooli Sharabiani**, Araz Soltani Nazarloo, Ebrahim Taghinezhad, Ibham Veza, Antoni Szumny, Adam Figiel. *Food Science & Nutrition*,11:5. (JCR-Q2. IF=3.9). https://doi.org/10.1002/fsn3.3071

11. Detection and identification of potato cultivars by olfactory machine by artificial neural network and LDA methods. **2023**. Asma Kisalaei, **Vali Rasooli Sharabiani**, Ali Khorramifar. *Journal of Environmental Science Studies*, 8:3. (in Persian- ISC-Q2)

12. Comparison of real and modeled apple drying process. **2023**. **Vali Rasooli Sharabiani**, Ali Khorramifar, Gholamhossein Shahgholi. *Journal of Environmental Science Studies*, 8:1. (in Persian-ISC-Q2)

13. Use of a Convolutional Neural Network for Predicting Fuel Consumption of an Agricultural Tractor. **2023**. Jalilnezhad, H. Abbaspour-Gilandeh, Y. **Rasooli-Sharabiani, V**. Mardani, A.Hernández-Hernández, J.L.Montero-Valverde, J.A. Hernández-Hernández, M. *Resources*,12: 46. (JCR-Q2, IF=3.3) https://doi.org/10.3390/resources12040046

14. Investigating Changes in pH and Soluble Solids Content of Potato during the Storage by Electronic Nose and Vis/NIR Spectroscopy. **2022**. Khorramifar, A, **Rasooli Sharabiani, V.**, Karami, H.; Kisalaei, A., Lozano, J., Rusinek, R., Gancarz, M. *Foods*, 11: 4077. (JCR-Q1, IF=5.561) https://doi.org/10.3390/foods11244077

15. Application of artificial neural networks, support vector, adaptive neuro-fuzzy inference systems for the moisture ratio of parboiled hulls. **2022**. **Vali Rasooli Sharabiani**, Mohammad Kaveh, Ebrahim Taghinezhad, Rouzbeh Abbaszadeh, Esmail Khalife, Mariusz Szymanek, and Agata Dziwulska-Hunek. *Journal of Applied Sciences*, 12: 4. (JCR-Q2, IF=2.838). https://doi.org/10.3390/app12041771

16. Prediction of Chlorophyll Content of Tomato Plant by Artificial Neural Networks and Adaptive Nero-Fuzzy Inference System. **2022**. **Vali Rasooli Sharabiani**, Asma Kisalaei, Ebrahim Taghinezhad. *Journal of Agricultural Mechanization*, No. 6:3; P: 59-65. (N/A)

17. Recognition and classification of pure and adulterated rice using the electronic nose. **2022**. **Vali Rasooli Sharabiani**; Ali Khorramifar. *Journal of Environmental Science Studies* , 7:2. (in Persian-ISC-Q2)

18. Quantitative analysis of organic acids in potatoes using NIR spectroscopy with PLS and ANN methods. **2022**. Asma Kisalaei, **Vali Rasooli Sharabiani**, Ali Khorramifar. *Journal of Environmental Science Studies*, 7:4. (in Persian-ISC-Q2)

19. Examining Regional Differences in Agricultural Machinery Sector Productivity Using Data Envelopment Analysis (DEA). **2022**. Javad Tarighi, Anvar Janeh, **Vali Rasooli Sharabiani**. *Agricultural Mechanization in Asia, Africa and Latin America(AMA)*, VOL:54, NO:1. (JCR-Q4. IF=0.287)

20. Comparison of energy consumption of rice production in lands with equipping and renovation plan and without it (Case study: Bandar Anzali city). **2022**. Mohammad Sagegh Besharati Moghadam, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad. *Journal of Environmental Science Studies*, No. 7:1. (in Persian-ISC-Q2)

21. Evaluation of Centrifugal Force, Erosion, Strain Rate, and Wall Shear in a Stairmand Cyclone. **2022**. Sajed Naiemi Dizajyekan, Gholamhossein Shahgholi, Adel Rezvanivand Fanaei , Vahid Rostampour, **Vali Rasooli Sharabiani**, Mariusz Szymanek , and Ryszard Kulig. *Processes,*10: 994. (JCR-Q2. IF=3.352) https://doi.org/10.3390/pr10050994

22. A Comprehensive CFD Assessment of Wheat Flow in Wheat Conveying Cyclone Validation and Performance Analysis by Experimental Data. **2022**. Sajed Naiemi Dizajyekan, Gholamhossein Shahgholi, Adel Rezvanivand Fanaei, Vahid Rostampour, **Vali Rasooli Sharabiani**, Mariusz Szymanek, and Andrzej Marczuk. *Processes*,10: 1. (JCR-Q2. IF=3.352) https://doi.org/10.3390/pr10010001

23. Hyperspectral imaging coupled with multivariate analysis and artificial intelligence to the classification of maize kernels. **2022**. Fariba Alimohammadi, Mansour Rasekh, Amir Hosein Afkari Sayyah, Yousef Abbaspour-Gilandeh, Hamed Karami, **Vali Rasooli Sharabiani**, Ambra Fioravanti, Marek Gancarz, Pavol Findura, Dariusz Kwaśniewski. *International Agrophysics* 36:2. (JCR-Q3. IF=1.627) https://doi.org/10.31545/intagr/147227

24. Estimation of moisture ratio for apple drying by convective and microwave methods using artificial neural network modeling. **2021**. **Vali Rasooli Sharabiani**, Mohammad Kaveh, Roozbeh Abdi, Mariusz Szymanek & Wojciech Tanaś. *Scientific Reports*, 11:9155. (JCR-Q2. IF=4.996) https://doi.org/10.1038/s41598-021-88270-z

25. Evaluation of DifferentModels for Non-Destructive Detection of Tomato Pesticide Residues Based on Near-Infrared Spectroscopy. **2021**. Araz Soltani Nazarloo, **Vali Rasooli Sharabiani**, Yousef Abbaspour Gilandeh, Ebrahim Taghinezhad and Mariusz Szymanek. *Sensors,* 21, 3032. (JCR-Q2. IF=3.847) https://doi.org/10.3390/s21093032

26. Inner properties estimation of gala apple using spectral data and two statistical and artificial intelligence based methods.**2021**. **Vali Rasooli Sharabiani**, Sajad Sabzi, Razieh Pourdarbani, Mariusz Szymanek, Sławomir Michałek. *Foods*, 10, 2967. (JCR-Q1. IF=5.561) https://doi.org/10.3390/foods10122967

27. Non-Destructive Prediction of Titratable Acidity and Taste Index Properties of Gala Apple Using Combination of Different Hybrids ANN and PLSR-Model Based Spectral Data. **2020**. **Vali Rasooli Sharabiani**, Sajad Sabzi, Razieh

Pourdarbani, Edgardo Solis-Carmona, Mario Hernández-Hernández and José Luis Hernández-Hernández. *Plants*, 9:12, 1718. (JCR-Q1. IF=4.658) https://doi.org/10.3390/plants9121718

28. Feasibility of Using VIS/NIR Spectroscopy and Multivariate Analysis for Pesticide Residue Detection in Tomatoes. **2021**. Araz Soltani Nazarloo, **Vali Rasooli Sharabiani**, Yousef Abbaspour Gilandeh, Ebrahim Taghinezhad, Mariusz Szymanek and Maciej Sprawka. *Processes,* 9. 196. (JCR-Q2. IF=3.352) https://doi.org/10.3390/pr9020196

29. Evaluation of specific energy consumption and GHG emissions for different drying methods (Case study: Pistacia Atlantica). **2020**. Mohammad Kaveh, Reza Amiri Chayjan, Ebrahim Taghinezhad, **Vali Rasooli Sharabiani**, Ali Motevali. *Journal of Cleaner Production*, 259: 120963. (JCR-Q1. IF=11.072) https://doi.org/10.1016/j.jclepro.2020.120963

30. Assessment of kinetics, effective moisture diffusivity, specific energy consumption, shrinkage, and color in the pistachio kernel drying process in microwave drying with ultrasonic pretreatment. **2020**. Ahmad Jahanbakhshi, Mohammad Kaveh, Ebrahim Taghinezhad and **Vali Rasooli Sharabiani**. *J Food Processing and Preservation*, 00:e14449. (JCR-Q3. IF=2.609) https://doi.org/10.1111/jfpp.14449

31. Parboiled Paddy Drying with Different Dryers: Thermodynamic and Quality Properties, Mathematical Modeling Using ANNs Assessment. **2020**. Ebrahim Taghinezhad, Antoni Szumny, Mohammad Kaveh, **Vali Rasooli Sharabiani**, Anil Kumar and Naoto Shimizu. *Foods*, *9*(1), 86. (JCR-Q1. IF=5.561) https://doi.org/10.3390/foods9010086

32. Potential use of machine vision technique for qualitative separation of walnut kernel (Kaghazi Walnut). **2020**. **Vali Rasooli Sharabiani**, Roya Farhadi, AmirHossein AfkariSayah, Ebarhim Taghinezhad. *Journal of Researches in Mechanics of Agricultural Machinery,* V: 9, No 2. (in Persian-ISC-Q4)

33. Blackberry drying with various pretreatments of thermal, pulsed, chemical and mechanical using convective-infrared combined method. **2020**. Ebrahim Taghinezhad, Mohammad Kaveh, **Vali Rasooli Sharabiani**. *Innovative Food Technologies,* 7:2. (in Persian-ISC-Q2) 10.22104/JIFT.2019.3600.1863

34. Modeling and Optimization of Energy Parameters in Rosmarinus officinalis drying with Microwave Pretreatment Using Response Surface Methodology. **2020**. **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad, Ramzan Hadipour Rokni. *Innovative Food Technologies*, 7:1, 17-29. (in Persian-ISC-Q2) 10.22104/JIFT.2019.3500.1839

35. Application of Soft Computing Methods and Spectral Reflectance Data for Wheat Growth Monitoring. **2019**. **V.R.Sharabiani**, F. H. Kassar, Y.A.Gilandeh, S. F. Ardabili. *Iraqi Journal of Agricultural Sciences*, 50(4):1064-1076. (JCR-ESCI. IF=0.6, ISC) https://doi.org/10.36103/ijas.v50i4.751

36. Quantifying of the relationship between novel intermittent drying variables and some quality properties of parboiled rice using response surface methodology. **2019**. **Vali Rasooli Sharabiani,** Taghinezhad Ebrahim. *Chemical Industry & Chemical Engineering Quarterly (Chem. Ind. Chem. Eng. Q)*, 25:3, p.207-215. (JCR-Q3. IF=1.2) https://doi.org/10.2298/CICEQ170813033S

37. Online Identification of Defect Bottles in Production Line of Soft Drink using Machine Vision. **2019.V. Rasooli Sharabiani**, O. Farhangi, E. Taghinezhad. *Journal of Agricultural Machinery*, 9:1, p. 123-137. (in Persian-SC-Q1) https://doi.org/10.22067/jam.v9i1.64834

38. Prediction of Protein Content of Winter Wheat by Canopy of Near Infrared Spectroscopy (NIRS), Using Partial Least Squares Regression (PLSR) and Artificial Neural Network (ANN) Models. **2019**. **Vali Rasooli Sharabiani**, Araz Soltani Nazarloo and Ebrahim Taghinezhad. *Yuzuncu Yıl University Journal of Agricultural Sciences,* 29:1. (ISC-Q3, Scopus) https://doi.org/10.29133/yyutbd.447926

39. Prediction of Starch Gelatinization Degree and Some Quality Properties of Parboiled Rice (Shiroudi Cultivar) During Steaming of Parboiling Process. **2018**. Taghinezhad, E., Vali Rasooli Sharabiani. *Journal of food science and technology (Iran),* 15:77, p183-192. (in Persian- ISC-Q4)

40. Quantifying the Best Mathmatical Model for Online Prediction of Starch Gelatinization Degree of Parboiled Rice (Shiroudi Variety) During Soaking of Parboiling Process. **2019**. Ebrahim Taghinezhad, **Vali RasooliSharabiani**. *Journal of food science and technology (Iran),* 15:85, p265-277. (in Persian-ISC-Q4)

41. Application of image processing and linear regression models for estimation of nitrogen content of tomato leaves. **2019**. Asma Kisalaei, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad. 2019. *Res. Crop*, 20:2, p345-352. (Scopus-Q3) 10.31830/2348-7542.2019.051

42. Modelling and Optimization of Hybrid HIR Drying Variables for Processing of Parboiled Paddy Using Response Surface Methodology. **2019**. Ebrahim Taghinezhad, **Vali Rasooli Sharabiani**, Mohammad Kaveh. *Iranian Journal of Chemistry and Chemical Engineering (IJCCE),* 38:4, p251-260. (JCR-Q3. IF=1.8) 10.30492/IJCCE.2019.31861

43. Modeling of Energy Consumption of Cucumber Greenhouses Usingartificial Neural Network and ANFIS. **2019**. Zahra Ebrahimpour, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad. *Emirates Journal for Engineering Research*, 24:4. (ISC-Q4)

44. Evaluation of the Environmental Effects of Cucumber Greenhouses Using Life Cycle Assessment (Case Study: East-azarbaijan Province). **2019**. Zahra Ebrahimpour, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad. *Iranian Journal of Biosystem Engineering,* 50:3, p513-522 . (in Persian-ISC-Q2) 10.22059/IJBSE.2019.274473.665151

45. The effect of combination dryer of hot air – infrared and microwave on some quality properties of parboiled rice. **2018**. Ebrahim Taghinezhad, **Vali Rasooli Sharabiani**. *Journal of Innovative Food Technologies(IFT)*, 5:1, p25-31. (in Persian- ISC-Q2) 10.22104/JIFT.2017.472

46. Evaluation of engineering properties for waste control of tomato during harvesting and postharvesting. **2019**. Ahmad Jahanbakhshi, **Vali Rasooli Sharabiani**, Kobra Heidarbeigi, Mohammad Kaveh, Ebrahim Taghinezhad. *Food science & nutrition,* 7:4, p1473-1481. (JCR-Q2. IF=3.9) https://doi.org/10.1002/fsn3.986

47. Effect of moisture content on terminal velocity of lentil grain. **2019**. Zahra Basati, Ezzatollah Askari Asli-Ardeh,**Vali Rasooli Sharabiani**. *Research in Agricultural Engineering (CAAS),* 65:1. (Scopus-Q3) https://doi.org/10.17221/92/2017-RAE

48. Non-destructive determination of vitamin C and lycopene contents of intact cv. Newton tomatoes using NIR spectroscopy. **2018**. Farzad Azadshahraki, Bahareh Jamshidi and **Vali Rasooli Sharabiani**. *Yuzuncu Yıl University Journal of Agricultural Sciences*, 28:4, 389-397. (ISC-Q3, Scopus-Q3) https://doi.org/10.29133/yyutbd.423458

49. Fuzzy logic, artificial neural network and mathematical model for prediction of white mulberry drying kinetics.**2018**. Shahpour Jahedi Rad, Mohammad Kaveh, **Vali Rasooli Sharabiani**, Ebrahim Taghinezhad. *Heat and Mass Transfer*, 54:11, p3361-3374. (JCR-Q3. IF=2.325)

50. ANFIS and ANNs model for prediction of moisture diffusivity and specific energy consumption potato, garlic and cantaloupe drying under convective hot air dryer. **2018**. Mohammad Kaveh, **Vali Rasooli Sharabiani**, Reza Amiri Chayjan, Ebrahim Taghinezhad, Yousef Abbaspour-Gilandeh, Iman Golpour. *Information Processing in Agriculture*, 5:3, p372-387. (JCR-ESCI) https://doi.org/10.1016/j.inpa.2018.05.003

51. Effect of chitosan coating on some quality properties of Thomson orange during storage (a case study in Iran). **2018**. Ebrahim Taghinezhad, **Vali Rasooli Sharabiani**. *Agricultural Engineering International: CIGR Journal,* 20:1, p157-161. (Scopus-Q3)

52. Investigation of the Effect of Soil Moisture content, contact surface Material and soil texture on soil friction and soil adhesion coefficients. **2018**. Yousef Abbaspour-Gilandeh, Fereshteh Hasankhani-Ghavam, Gholamhosein Shahgoli, **Vali Rasooli Shrabiani**, Mohammadreza Abbaspour-Gilandeh. *Acta Technologica Agriculturae*, 21:2, p44-50. (JCR-ESCI. IF=1.4, ISC) https://doi.org/10.2478/ata-2018-0009

53. Modeling of thermodynamic properties of carrot product using ALO, GWO, and WOA algorithms under multi-stage semi-industrial continuous belt dryer. **2019**. Mohammad Kaveh, Reza Amiri Chayjan, Ebrahim Taghinezhad, Yousef Abbaspour Gilandeh, Abdollah Younesi, **Vali Rasooli Sharabiani**. *Engineering with Computers*, 35:3, p1045-1058. (JCR-Q1. IF=8.7) https://doi.org/10.1007/s00366-018-0650-2

54. Applications of Stereovision in precision Agriculture. **2016**. Hasan Sarbazi, **Vali Rasooli Sharabiani**. *Journal of Research in Science, Engineering and Technology*, 4:4, p36-40. (N/A)

55. Significant Wavelengths for Prediction of winter wheat growth status and grain yield Using Multivariate Analysis. **2014**. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. *Journal of Engineering in Agriculture, Environment and Food(EAEF),* 7:1, p14-21. (Scopus-Q3) https://doi.org/10.1016/j.eaef.2013.12.003

56. Evaluation of an Active Remote Sensor for Monitoring Winter Wheat Growth Status. **2013**. **Vali Rasooli Sharabian**, Noboru Noguchi, Issei Han-ya, Kazunobu Ishii. 2013. *Journal of Engineering in Agriculture, Environment and Food (EAEF),* 6:3, p118-127. (Scopus-Q3) https://doi.org/10.11165/eaef.6.118

57. Optimal Vegetation Indices for Winter Wheat Growth Status Biased on Multi Spectral Reflectance. **2013**. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 2013. *Environ. Control Biol.,* 51:3, p105-112. (ISI, Scopus-Q3) https://doi.org/10.2525/ecb.51.105

58. Design, Construction and Calibration of an Adjustable Three-Point Hitch Dynamometer for Common Agricultural Tractors in Iran. **2010**. Y. Abbaspour-Gilandeh, S. Haghighat-Shishvan,**V. Rasooli-Sharabiani,** Z. Fazel-Niari. *Journal of Agricultural Engineering Research (Food Engineering Research),* 11:2, p 29-48. (in Persian-ISC-Q4) 20.1001.1.26454531.1389.11.2.3.4

59. Design, Fabrication and Evaluation of a Tractor-Mounted Soil Cone Penetrometer with Multiple Probes. **2010**. Y. Abbaspour-Gilandeh, M. Ahani, E. Askari Asli-Ardeh, **V. Rasooli-Sharabiani**, O. Sofalian. 2010. *Journal of Agricultural engineering research (Food Engineering Research,*11:1, p19-38. (in Persian-ISC-Q4) 20.1001.1.26454531.1389.11.1.2.1

60. Effects of Tillage Methods on Soil Fragmentation in loam-clay soils. **2009**. Yousef Abbaspour-Gilandeh, **Vali Rasooli Sharabiani**, Ahmad Khalilian. *American Journal of Agricultural & Biological Sciences,* 4:2, p131-136. (N/A) https://doi.org/10.3844/ajabssp.2009.131.136

61. Determination of the Degree, Level and Capacity Indices for Agricultural Mechanization in Sarab Region. **2008**. **V. Rasooli Sharabiani**, I. Ranjbar. *Journal of Agricultural Science and Technology (JAST)*, 10:3, p215-223. (JCR-Q3-IF=1.2, ISC-Q1) 20.1001.1.16807073.2008.10.3.1.7

62. The situation of agricultural mechanization in sarab city-iran. **2008**. **V. Rasooli Sharabiani**. *Agricultural Mechanization in Asia, Africa, and Latin America (AMA)*, 39:2, p57-63. (JCR-Q4, IF=0.237)

63. Development and Testing of metering unit of Sugarcane Stalk Planter. **2007**. Mohamadi, A. **V. Rasooli Sharabiani**, M. Almasi. *Journal of Science and Technology,* 6:2, p 26-37. (in Persian- N/A)-Hard Copy

64. Determination of mechanization coefficients and indices for primary tillage operation by using popular tractors and plows in Chahar Maha-va Bakhtiary Province of Iran. **2006**. F. Azad Shahraki, *V. Rasooli Sharabiani*. *Journal of Science and Technology,* 5:2, p50-55. (in Persian-N/A) -Hard Copy

Conference Papers:

1. An overview of the automation of pest and weed control in the field. **2023**. **Vali Rasooli Sharabiani**, Nader Alipour, Gholamhossein Shahgholi, Mohammad bagher Safari, Somayeh Nourzadeh. 3rd International and 7th National conference on Organic vs. Conventional Agriculture. 21-22 August, Ardabil, Iran.

2. Investigating the effective parameters on the draft force of a narrow vertical tillage blade under different operating conditions. **2023**. Hamid Jalilnejhad, Yousef Abbaspour-Gilandeh, **Vali Rasouli Sharabiani**. 3rd International and 7th National conference on Organic vs. Conventional Agriculture. 21-22 August, Ardabil, Iran.

3. Solutions to reduce the waste of garden products and their use. **2022**. Ramin Jahandideh, **Vali Rasouli Sharabiani**, Sina Faizollahzadeh Ardabili. 2nd national waste management conference. 12-13 September, Ardabil, Iran.

4. Using the finite element method to optimize the chiselplow. **2022**. Vali Rasooli Sharabiani, Asma Kisalaei. 8th Scientific and Research conference on the Development and Promotion of Agricultural Scinence and Natural Resources of Iran. 18-19 October, Kashmar, Iran.

5. Estimation of Wheat Crop Yield Using Satellite Image Processing. **2021**. Leila Hasanzadeh, **Vali Rasooli Sharabiani**, Asadollah Mirasi. 13th National Congress on Biosystems Engineering and Agricultural Mechanization 15-17 September, Tehran, Iran.

6. Smartphone based operating behaviour modelling of agricultural machinery. **2019**. Samira Aslani, Paria Omidvar, **Vali Rasooli Sharabiani**. 2th National conference on Organic vs. Conventional Agriculture. 24-25 August, Ardabil, Iran.

7. Multivariate Analyzing and Artificial Neural Networks for Prediction of Protein Content in Winter Wheat Using Spectral Characteristics**. 2018. Rasooli Sharabiani V**, Soltani A and Noguchi N. VI international scientific congress on Agricultural Machinery. 25-28 June, Burgas, Bulgaria.

8. Prediction of the moisture ratio of parboiled rice Using Neural Network and ANFIS. **2018**. **Vali Rasooli Sharabiani**, Mohammad Kaveh and Ebrahim Taghinezhad. 2nd International and 25th Iranian Congress on Food Science and Technology. 25-26 April. Sari, Iran.

9. Modeling and Optimization of Energy Consomption in Cucumber Greanhouses using LCA. **2017**. Zahra Ebrahimpour and **Vali Rasooli Sharabiani**. 3rd International conference on sustainable development, strategies and challenges with a focus on Agriculture, Natural Resources, Environment and Tourism. 7-9 March. Tabriz, Iran.

10. Robots Application for Auto management in Precision Agriculture. **2016**. Mojtaba Dadashzadeh and **Vali Rasooli Sharabiani**. 2nd International Conference on New Finding of Agricultural Science, Natural Resources and Environment. 6-7 March. Tehran, IRAN.

11. Crop Row Detection Based on Stereo Vision for Auto Navigation in Agricultural Tractors. **2016**. Afshin Azizi and **Vali Rasooli Sharabiani**. 2nd International Conference on New Finding of Agricultural Science, Natural Resources and Environment. 6-7 March. Tehran, IRAN.

12. Using Spectral Reflectance Techniques in Cereal Production. **2015**. **Vali Rasooli Sharabiani** and Forough Keyhani. 4th National Congress in Organic and Conventional Agriculture. 18-19 August. Ardabil. Iran.

13. Estimation of Nitrogen Content in Tomato Tillers by Using RGB Image Analyzing. **2015**. **Vali Rasooli Sharabiani** and Bahram Azad. 4th National Congress in Organic and Conventional Agriculture. 18-19 August. Ardabil. Iran

14. A Technical Investigation of Off-Road Vehicle Navigation Systems in Agricultural Automation. **2015**.Sajed Naeemi and **Vali Rasooli Sharabiani**. The first conference of Science and New Technologies in Iran. 5-6 December, Tehran, Iran.

15. Comparison of Image Processing Methods and other Algorithms for Determination of Chlorophyll Content on Plants. **2015**. Fariba Alimohammadi and **Vali Rasooli Sharabiani**. International Conference on Sustainable Development with Focus on Agriculture, Environment and Tourism. 16-17 September, Tabriz, IRAN.

16. Image Processing Applications in Precision Agriculture. **2014**. **Vali Rasooli Sharabiani**. 3th National Congress in Organic and Conventional Agriculture. 18-19 August. Ardabil. Iran.

17. Prediction of winter wheat growth status and grain yield Using Partial Least Square Regression. **2013**. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. Proceedings of: the 5th Asian Conference on Precision Agriculture (ACPA) June 25-28, Jeju, South Korea.

18. Appropriate Wavelengths for Winter Wheat Growth Status Based on Multi Spectral Reflectance Data. **2012**. **Vali Rasooli Sharabian**, Noboru Noguchi, Kazunobu Ishii. 11th International Conference on Precision Agriculture (ICPA), 15-18 July, Indianapolis, Indiana USA.

19. Investigation of Active Plant Nutrition Sensor in the Winter Wheat. **2012**. **Vali Rasooli Sharabian**, Noboru Noguchi, Issei Han-ya, Kazunobu Ishii. Dynamics and Control in Agriculture and Food Processing (IFAC). 13-16 June, Plovdiv, Bulgaria.

20. Monitoring Winter Wheat Growth Using Plant Nutrition Active Sensor. **2011**. **Vali Rasooli Sharabian**, Issei Han-ya, Keisuke Hara, Kazunobu Ishii, Noboru Noguchi. Proceedings of: the 4th Asian Conference on Precision Agriculture, 4-7 July, Obihiro, Japan.

21. Monitoring and Estimation Winter Wheat Growth Using Remote Sensing. **2011**. **Vali Rasooli Sharabian**, Issei Han-ya, Keisuke Hara, Kazunobu Ishii, Noboru Noguchi. Annual Meeting of Japanese Society for Agricultural, Biological, and Environment Engineering and Scientists (JSABEES), 6-8 September, Sapporo, Japan.

22. Development of Variable Rate Fertilization System using Plant Nutrition Sensor. **2011**. Issei Han-ya, Kazunobu Ishii, **Vali Rasooli Sharabian**, Keisuke Hara, Noboru Noguchi. Proceedings of: the 4th Asian Conference on Precision Agriculture, 4-7 July, Obihiro, Japan.

23. Modeling the effect of narrow blade geometry on soil failure and draft force using Discrete Element Method. **2010**. Gholamhosein Shahgoli, Naser Shahi and **Vali Rasooli Sharabiani**. Proceedings of: the Joint 9th Asia-Pacific ISTVS Conference and Annual Meeting of Japanese Society for Terramechanics. 27-30 September, Sapporo, Japan.

24. Determination of agricultural mechanization indices according to traction power of common tractors in Ardabil plain-Iran. **2009**. **Rasooli Sharabiani, V**., and Abbaspour-Gilandeh, Y. International Agricultural Engineering Conference, 7-10 December, Bangkok, Thailand.

25. Mechatronics assessment in tillage by continuous soil mechanical strength measurement. **2009**. Abbaspour-Gilandeh, Y., **Rasooli-Sharabiani, V**., Askari Asli-Ardeh, E., Shahgholi, G., Rahimi-Ajdadi, F. The First National Conference on Modern Technologies in Agriculture and Natural Resources, 25-26 June, Rasht, Iran.

26. Design and performance of a tractor-mounted soil cone penetrometer with multiple-adjustable-probe. **2009**. Ahani, M., Abbaspour-Gilandeh, Y., Askari Asli-Ardeh, E., **Rasooli Sharabiani, V**. International Agricultural Engineering Conference, 7-10 Decembe, Bangkok, Thailand.

27. Design and performance of a new adjustable three- point linkage dynamometer. **2009**. Haghighat-Shishvan, S., Abbaspour-Gilandeh, Y., Askari Asli-Ardeh, E., **Rasooli Sharabiani, V**. International Agricultural Engineering Conference, 7-10 Decembe, Bangkok, Thailand.

28. Application of artificial neural network for predicting fuel consumption of Tractor. **2009**. Abbaspour-Gilandeh, Y., Rahimi-Ajdadi, F., Askari Asli-Ardeh, E., **Rasooli Sharabiani, V**. 2009. International Agricultural Engineering Conference, 7-10 Decembe, Bangkok, Thailand.

29. Design, construction and calibration of extended octagonal ring transducers for measurement of tractor-implement forces. **2009**. Abbaspour-Gilandeh, Y., Haghighat-Shishvan, S., Omid, M., Askari Asli-Ardeh, E., **Rasooli Sharabiani, V**. International Agricultural Engineering Conference, 7-10 Decembe, Bangkok, Thailand.

30. Introducing a new model of cone penetrometer due to measurement of cone index data at controlled traffic farms. **2009**. Ahani, M., Abbaspour-Gilandeh, Y., Askari Asli-Ardeh, E., **Rasooli Sharabiani, V**. 11th Iranian Soil Sciences Congress, 19-20 June, Gorgan, Iran.

31. Effect of Tillage Equipment Combination on Soil Physical Properties and Potato Yield. **2007**. **V. Rasooli Sharabiani** and Y. Abbaspour. International Agricultural Engineering Conference (IAEC), 3-6 December, Bangkok, Thailand.

32. Investigation of the Effect of Tillage Equipment Combination for Soil Crumbling. **2007**. **V. Rasooli Sharabiani,** Y. Abbaspour. International Agricultural Engineering Conference (IAEC), 3-6 December Bangkok, Thailand.

33. Investigation of Tillage Methods on Some Soil Physical Properties. **2007**. **V. Rasooli Sharabiani**, Y. Abbaspour. 5th Conference of Agricultural machinery engineering and mechanization. 25-26 August, Mashhad, Iran.

34. Continuous Measurement of Horizontal Soil Mechanical Resistance at Different Soil Depths. **2007**. Y. Abbaspour, **V. Rasooli Sharabiani**. International Agricultural Engineering Conference (IAEC), 3-6 December, Bangkok, Thailand.

35. Investigation of Soil Fragmentation in four Methods of Tillage on loam-clay soil. **2006**. **V. Rasooli Sharabiani**, Y. Abbaspour. 10th National Conference of Soil Science, 21-22 June, Karadj, Iran.

36. Evaluating present agricultural mechanization situation and presenting development guidelines for the Sarab County. **2002**. **V. Rasooli Sharabiani**, I. Ranjbar, M. Almasi. 2th Conference of Agricultural machinery engineering and mechanization, 25-26 June, Karadj, Iran.

BOOKS

1. *Engine and Tractor* (for agricultural machinery B. Sc. students). Published by Mahde-Tamadon of Ardabil, IRAN. **Vali Rasooli Sharabiani**. **2005**. (in Persian)

2. *Principal Component Regression for Crop Yield Estimation*. Published by Sanayeh-Sorkh of Ardabil, IRAN. **Vali Rasooli Sharabiani** & Asma Kisalaei. **2018**. (Translated to Persian)

3. *Automation: The Future of Weed Control in Cropping Systems*. Published by University of Mohaghegh Ardabili, IRAN. **Vali Rasooli Sharabiani,** Forough Keyhani & Abdolreza Ahmadi. **2019**. (Translated to Persian)

4. *PRECISION FARMING, Soil Fertility and Productivity Aspects*. Published by acecr.ac.ir, IRAN. **Vali Rasooli Sharabiani** & Sajjad Sardari. **2019**. (Translated to Persian)

5. *Hyperspectral Imaging Analysis and Applications for Food Quality*. Published by University of Mohaghegh Ardabili, IRAN. **Vali Rasooli Sharabiani** & Sajjad Sardari. **2023**. (Translated to Persian)

6. *Precision Agriculture for Grain Production Systems*. Negin Sabalan Publisher, Ardabil, IRAN. **Vali Rasooli Sharabiani**, Saeed Dehghan, GHolamreza Taghizadeh & Meysam Nahavandi. **2023**. (Translated to Persian)

7. *The Unscrambler (Textbook)*. Mohaghegh Ardabili Publisher, Ardabil, IRAN. **Vali Rasooli Sharabiani,** Nadia Saadati, Majid Dadkhah. **2023**. (in Persian)

8. *Unmanned Aerial Vehicle:Applications in Agriculture and Environment*. Mohaghegh Ardabili Publisher, Ardabil, IRAN. **Vali Rasooli Sharabiani,** Leila Hasanzadeh, Mohammad Sadegh Besharati, Musa Azad. **2023**. (Translated to Persian)

PROJECTS

1. Using Electronic Nose to Detect Potato Varieties using Chemometric Methods. **Vali Rasooli Sharabiani**, Ali Khorramifar, Asma Kisalaei. University of Mohaghegh Ardabili, Ardabil. Iran. **2023**. (2000 USD)

2. Estimation of changes in potato acidity and SSC over time by spectroscopy. **Vali Rasooli Sharabiani**, Ali Khorramifar, Asma Kisalaei. University of Mohaghegh Ardabili, Ardabil. Iran. **2023**. (2000 USD)

3. Comparison of real and simulated apple drying process. **Vali Rasooli Sharabiani**, Ali Khorramifar, Gholamhosein Shahgoli. University of Mohaghegh Ardabili, Ardabil. Iran. **2022**. (2000 USD)

4. Distinguish between pure cultivars and gross rice cultivars using an E-nose. **Vali Rasooli Sharabiani**, Ali Khorramifar. University of Mohaghegh Ardabili, Ardabil. Iran. **2022**. (2000 USD)

5. The use of hybrid artificial neural network - Simulated Annealing algorithm (ANN-SA) method in determining key wavelengths for non-destructive estimation of chemical properties of apple fruit. **Vali Rasooli Sharabiani,** Razieh Pourdarbani, Sajad Sabzi. University of Mohaghegh Ardabili, Ardabil. Iran. **2021**. (2000 USD)

6. The performance comparison of two methods namely Partial Least Squares Regression (PLSR) and hybrid Artificial Neural Network - Particle Optimization Optimization Algorithm (ANN-PSO) in estimating the number of internal properties of Gala apples. **Vali Rasooli Sharabiani**, Razieh Pourdarbani, Sajad Sabzi. University of Mohaghegh Ardabili, Ardabil. Iran. **2021**. (2000 USD)

7. The effect of different pretreatments on drying, thermodynamic and greenhouse gas properties under different dryers using artificial neural networks and ANFIS (Case study: Blackberry). Ebrahim Taghinezhad, **Vali Rasooli Sharabiani** and Mohammad Kaveh. University of Mohaghegh Ardabili, Ardabil. Iran. **2019**. (2000 USD)

8. Prediction of Crop Growth Monitoring by Using Spectral Data and Soft Computing on Wheat. **Vali Rasooli Sharabiani**, Yousef Abbaspour Gilandeh, Sina Faiz-o-llah zade Ardabili and Sama Amid. University of Mohaghegh Ardabili, Ardabil. Iran. **2018**. (2000 USD)

9. Online determination of starch gelatinization degree of parboileed rice by measurement of dielectrice constant of paddy water during soaking. Ebrahim Taghinezhad and **Vali Rasooli Sharabiani**. University of Mohaghegh Ardabili, Ardabil. Iran. **2017**. (2000 USD)

10. Investigation of the effect of equipment combination for soil physical properties and potato yield. **V. Rasooli Sharabiani**, Y. Abbaspour and H. Mostafayi. University of Mohaghegh Ardabili, Ardabil. Iran. **2008**. (1500 USD)

11. Determination of the optimum furrow length in potato irrigation for many kinds of soil texture. H. Gorbani, **V. Rasooli Sharabiani**, and H. Heydari. Research Division of Ardabil province Governorate. Ardabil. Iran. **2008**. (5000 USD)

12. The study of some physical and mechanical (under compression loading) properties of three potato cultivars during storage time. A.Golmohamadi, M. Rasekh and **V. Rasooli Sharabiani**. University of Mohaghegh Ardabili, Ardabil. Iran. **2008**. (1500 USD)

13. Determination of Agricultural Mechanization Indexes According to Traction Power of Common Tractors in Ardabil Plain. **V. Rasooli Sharabiani**, Y. Abbaspour and R. Asgari. University of Mohaghegh Ardabili, Ardabil. Iran. **2008**. (2000 USD)

14. Investigation of the effect of tillage equipment combination for soil crumbling. **V. Rasooli Sharabiani**, A. Golmohamadi and R. Asgari. University of Mohaghegh Ardabili, Ardabil. Iran. **2005**. (1500 USD)

HONORS AND AWARDS

- **The third national festival and the first international festival of the best scientific works** - **Khayyam special award (2020) the best Thesis**: Identification and Investigation of Progress and Stagnation Factors in the Plain of Equipping and Modernization of Paddy Lands in West of Guilan Province. **Mohammad Sadegh Besharati Moghaddam.** (I was the superviser of this thesis)

CONTRIBUTION IN RESEARCH

MEMBER OF EDITORIAL BOARD

- Journal of Agricultural Mechanization in Asia, Africa and Latin America (AMA), JAPAN. (JCR-Q4, IF=0.237)

JOURNAL REVIEWER

- Journal of Foods (MDPI) (JCR-Q1, IF=5.2)
- Journal of Agriculture (MDPI) (JCR-Q1, IF=3.6)
- Journal of Agronomy (MDPI) (JCR-Q1, IF=3.7)
- Journal of Agronomy (MDPI) (JCR-Q2, IF=3.9)
- Journal of Agricultural Science and Technology (JAST) (JCR-Q3, IF=1.2)
- Spanish Journal of Agricultural Research (JCR-Q3, IF=0.9)
- Pakistan Journal of Agricultural Sciences (JCR-Q4, IF=0.8)
- Journal of Agricultural Machinery (ISC-Q1) (in Persian)
- Iranian Journal of Biosystem Engineering (ISC-Q2) (in Persian)
- Journal of Innovative Food Technology (ISC-Q2) (in Persian)
- Journal of Environmental Science Studies (ISC-Q2) (in Persian)
- Journal of Researches in Mechanics of Agricultural Machinery (ISC-Q4) (in Persian)
- Agricultural Engineering International: CIGR Journal (Scopus-Q3)

ORGANIZATION OF CONFERENCES

1. Member of the Scientific Committee; The 3rd inrenational and 7th national congress of Organic and Conventional Agriculture, University of Mohaghegh Ardabili, Iran. **2023**

2. Member of the Scientific Committee; The 1st inrenational and 5th national congress of Organic and Conventional Agriculture, University of Mohaghegh Ardabili, Iran. **2019**

3. Member of the Scientific Committee; The 4th national congress of Organic and Conventional Agriculture, University of Mohaghegh Ardabili, Iran. **2017**

4. Member of the Scientific Committee; The 4th national congress of Organic and Conventional Agriculture, University of Mohaghegh Ardabili, Iran. **2015**

5. Chairman of the Organizing Committee; The 4th Scientific Societies of Students Congress in Faculty of Agriculture, University of Mohaghegh Ardabili, Iran. **2004**

6. Chairman of the Organizing Committee; The 3rd Scientific Societies of Students Congress in Faculty of Agriculture, University of Mohaghegh Ardabili, Iran. **2003**

PROFESSIONAL MEMBERSHIPS

1. Member of Iranian Society of Agricultural Machinery Engineers and Mechanization (Since 2000)

2. Member of Agricultural and Natural Resources Engineering Organization of Ardabil (Since 2007)

3. Member of Japanese Society of Agricultural Machinery and Food Engineers (JSAM) (2010-2013)

4. Member of American Society of Agricultural and Biological Engineers (ASABE) (2011-2013)

THESIS SUPERVISER

PHD STUDENTS

1. *Spectroscopy and Soft Computing:* Non-Destructive Identification of Pesticides Residue in Tomatoes Using Vis / NIR Spectroscopy, Multivariate Analyzing and Artificial Intelligence. **Araz Soltani (2020)**

2. *Nondestructive Evaluations and Soft Computing:* Feasibility of an Algorithm Designing for non-Destructive Identification of coffee Quality using Spectroscopy and Electronic Nose with Soft Computing. **Ehsan AghdamiFar (2023)**

3. *Computational Fluid Dynamics (CFD):* Numerical study of cyclene dimentions effect on centrifugal forces, shear stress and erosion in wheat and lentil using Computational Fluid Dynamics. **Sajed Naimi (2022)**

4. *Image Processing and Spectroscopy:* Image Processing and Hyperspectral imaging coupled with multivariate analysis and artificial intelligence to the classification of maize kernels. **Fariba Alimohammadi Sarab (2023)**

5. *Modeling and computational intelligence:* Modeling the effective parameters on tractor tractive performance using computational intelligence. **Hamid Jalilnezhad (2023)** in progress

6. *Soil Properties and DEM:* Investigating the addition of organic matter to the soil on the compressive properties of the soil under the vehicle tires using the discrete element method (DEM) and the laboratory method. **Saeed Dehghan (2023)** in progress

7. *Manufacturing and Robotic:* Design, manufacture and evaluation of greenhouse plant seedling transfer robot with the help of precision machine technology. **Saeed Khodatars (2023)** in progress

8. *Medical Plant Dryer and Quality:* Design and development of a combined dryer (hot air, infrared, and microwave) with an approach to predicting some chemical compounds of some medical plants using spectrometry. **Asma Kisalaee (2023)** in progress

MASTER STUDENTS

1. *Image Processing:* Using Image Processing for Nitrogen Content Detection in Tomato Leaves. **Asma Kisalaei (2016)**

2. *Image Processing:* Estimation of Wheat Nitrogen Content Using Digital Image Processing. **Fatemeh Golmohammadzadeh (2017)**

3. *Mechanization:* The Evaluation of Grain Losses In Kurdistan Combine (K130). **Soliman Rasha (2016)**

4. *Mechanization:* Determination of Probability of a Working Day for Tillage Operation in Ardabil. **Saleh Soltani Galandar (2017)**

5. *Mechanization and GIS:* Investigation of feasibility of agricultural mechanization management in ParsAbad Region using GIS. **Shahriyar Khoshbin (2017)**

6. *Modeling:* The Feasibility study of linear programming and fuzzy multi-objective two-step in the development optimal cropping pattern with emphasis on water resources (case study of Golpaygan city). **Hamid Seifi (2017)**

7. *Design and construction & Artificial Intelligence:* Design and construction of online intelligent sorting system for hazelnut using acoustic processing and neural networks. **Saber Naderi (2018)**

8. *Image Processing:* Study of feasibility for defects and sizes of apple (golden delicious) by digital online image processing. **Ghotbaddin Brukimilan (2018)**

9. *Modeling, Energy Management and LCA:* Optimization of Energy Consumption of Cucumber Greenhouses in East Azarbaijan sharghi. **Zahra Ebrahimpour (2017)**

10. *Energy Management and GIS:* Determination of Energy Consumption for Wheat Production and its GIS maps in Ardabil. **Mir Mohsen Mousavizad (2017)**

11. *Mechanization:* Identification and Investigation of Progress and Stagnation Factors in the Plain of Equipping and Modernization of Paddy Lands in West of Guilan Province. **Mohammad Sadegh Besharati Moghaddam (2017)**

12. *Electronic Noise:* Nondestructive evaluation of medicinal plant qualitative properties after drying using Olfactory Machine (Case study: Lallement Family). **Saeid Atashbar (2018)**

13. *Post Harvesting:* Study of storage conditionsons on quality of cumin essential oil. **Hassan khosrojerdi (2018)**

14. *Image Processing:* Determination of visual characteristics of egg for quality evaluation by image processing method. **Sajjad Sardari (2018)**

15. *Energy Management:* Investigating the Balance of Input and Output Energy in Oilseed Sunflower (Case study: Khoy city). **Hossain Lotfalinezhad (2018)**

16. *Image Processing:* The application of image processing based on leaf area index for identifying of cucumber various cultivars. **Reza Asghari (2018)**

17. *Image Processing and Computational Intelligence:* The study of feasibility of conventional rice varieties in Iran using digital image processing and computational intelligence. **Amir Molaee(2016)**

18. *Design and Construction and Drying:* Design and manufacture of combined fluidized bed dryer using thermal resources of infrared, microwave and hot air. **Mohsen Naseri. (2019)**

19. *Spectroscopy and Nondestructive Evaluations:* Non-Destructive Identification of Quality Parameters of Peach Fruit Using Vis / NIR Spectroscopy and Multivariate Analyzing. **Fatemeh Alizade (2019)**

20. *Remote Sensing and Satellite Imaginary:* Estimation of wheat crop yield using landsat 8 satellite image processing in Ardabil. **Leila Hasanzadeh. (2021)**

21. *Spectroscopy and Detection:* Detection and Prediction of Pear Fruit Quality by Spectral Methods. **Naeges Saadati Sharafeh (2022)**

22. *Image Processing and Classification:* Classification of Sour Cherries Based on Shape Using Image Processing, Artificial Neural Network and Support Vector Machine. **Mahdieh Honarvar(2023)**

23. Life Cycle Assessment (LCA): Comparison of cotton and peanut production by life cycle assessment (LCA): case study in Moghan region. **Ramin Jahandideh (2023)**

24. *Spectroscopy and Soil Properties:* Detection of some vital mineral materials of soil using spectroscopic methods. **Meysam Nahavandi (2023)** in progress

TEACHING COURSES

- Agricultural Machinery Systems (B.Sc., 32 times)
- Computer Programing (Visual C++ & Python) (B.Sc., 16 times)
- Hydraulics and Electricity Systems in the Farm Machinery (B.Sc., 8 times)
- Fundamental of Instrumentation and Control (M. Sc., 8 times)
- Remote Sensing and Application of GPS and GIS in Agriculture (M. Sc., 9 times)
- Image Processing and Machine Vision (M. Sc., 8 times)
- Robotics and Automation in Agricultural Vehicles (Ph.D., 8 times)
- Models and Mechanisms in Technology Transfer (Ph.D., 8 times)