



**Ebrahim Taghinezhad (Associate Professor)**

**Personal information:**

Name: Dr. Ebrahim Taghinezhad

Date of Birth: 1984

Marital State: M

Address1: Department of Biosystems Engineering, Tarbiat Modares University (TMU), Tehran, Iran. P.O.Box:14115-111

Address2: A research scientist at the Department of Food Chemistry, Wrocław University of Environmental and Life Science, Wrocław, Poland. P.O.Box: 50-375

Website: <http://www.uma.ac.ir/e.taghinezhad>

ResearchGate: [https://www.researchgate.net/profile/Ebrahim\\_Taghinezhad](https://www.researchgate.net/profile/Ebrahim_Taghinezhad)

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=56646573900>

ResearcherID: <https://www.webofscience.com/wos/author/record/F-6300-2016>

Google scholar: <https://scholar.google.co.in/citations?hl=en&pli=1&user=iBqSC9kAAAAJ>

Web of Science: <https://publons.com/researcher/1509213/ebrahim-taghinezhad/metrics/>

Orcid: <https://orcid.org/0000-0002-1093-6115>

E-mail: [ebrahim.taghinezhad@upwr.edu.pl](mailto:ebrahim.taghinezhad@upwr.edu.pl) or [e.taghinezhad@modares.ac.ir](mailto:e.taghinezhad@modares.ac.ir)

**Academic qualification:**

- 1) Philosophy of Doctorate (Ph.D) major in Agricultural Machinery Mechanic Engineering, Department of Biosystem Mechanical Engineering, Tarbiat Modares University, Tehran, IRAN (PhD award date: 21-07-2015).
- 2) Master of Science (M.Sc) major in Agricultural Machinery Mechanic Engineering, Department of Biosystem Mechanical Engineering, University of Tarbiat Modares, Tehran, IRAN (2011).
- 3) Bachelor of Science in Agricultural Machinery Engineering, Department of Biosystem Mechanic Engineering, Ferdowsi University, Mashhad, IRAN (2008).

**Research interests:**

1. Precision Agriculture and Remote Sensing (Machine Vision, Spectroscopy)
2. Design and Manufacture of Modern Agricultural Machinery (Sensors and automatic Control)
3. Modeling and Optimization using Soft Computing (ANNs, ANFIS, RSM, Unscumbler)

**Professional skills:**

- Application of Specific Software such as Design expert (for Modelling and Optimization), Unscumbler (for spectroscopy data processing), Matlab with subscript of Neural network and ANFIS (for prediction).
- Member of European Network for assuring food integrity using non-destructive spectral sensors (SensorFINT).

### **Research experience:**

#### **Graduated PhD thesis (Supervisor or advisor):**

1. Nasrollah Fazeli Bourestan, Extraction of rheological-optical characteristics of rice single kernel, in order to develop an instrumental method for determining grain quality, University of Mohaghegh Ardabili, 9-9-2020, Director.
2. Ehsan Aghdamifar, Feasibility study of designing a non-destructive coffee quality detection algorithm using spectroscopy and electronic nose with software calculations, University of Mohaghegh Ardabili, 29 - 7 – 2023, Director.
3. Saleh Yasour-Pourali, Investigating the effects of different methods of drying of kiwi fruit and non-destructive evaluation of its quality by near infrared spectroscopy (Vis-NIR), University of Mohaghegh Ardabili, 18-12-2024, Director.
4. Asma Kisalalei, Design and development of a combined dryer (hot air, infrared, and microwave) with an approach to predicting some chemical compounds of medicinal plants using spectroscopy, University of Mohaghegh Ardabili, 15-1-2025, Director.
5. Araz Soltani Nazarlo, Non-Destructive Identification of Pesticides Residue in Tomatoes Using Vis/NIR Spectroscopy, Multivariate Analysing and Artificial Intelligence. University of Mohaghegh Ardabili, 26 - 1 – 2023, Advisor.
6. Milad Teymori-Omran, Performance evaluation of a combined system of parabolic trough solar concentrator-refractive window dryer for drying apple slices, University of Mohaghegh Ardabili, 12-11-2024, Advisor.

#### **MSc Projects:**

1. Eng. Asghari, with titled: *The application of image processing based on leaf area index for indentifying of cucummbber various cultivars*, (2016).
2. Eng. Babazadeh, with titled: *The effect of soaking temperature and cooking time the qualitative and marketability properties of parboiled rice of Shiroudi variety*, (2019)
3. Eng. Ebrahimpour, with titled: *Modeling and Optimization of Energy Consumption for Cucumbers Greenhouses in Tabriz*, (2019)
4. Eng. Lotfalinezhad, with titled: *Investigating the Balance of Input and Output Energies in Oilseed Sunflower (Case study: Khoy city)*, (2019).
5. Mr. Naseri, with titled: *"Desing and manufacture of combined fluidized bed dryer using thermal resources of infrared, microwave and hot air"*, (2020)
6. Mrs. Narges Saadati. With titled: *"Detection and Prediction of Pear Fruit Quality during Drying Process by Hyper Spectral Method"*, (2021).

### **Thesis/papers/research report written:**

#### **a) Published articles**

1. **Taghinezhad, E.**, Khoshtaghaza, M., Hashemi, S. and Omrani, A. (2013). Thompson Orange Disinfection With Ortho Phenyl Phenol Solution By Thermal Fogging Machine And Investigation Its Physicochemical Properties During Storage Period. Iranian Journal Of Food Science And Technology, 10 (38): 69-80. (in Persion).
2. **Taghinezhad, E.**, Hashemi, S.J. and Tabatabaei, S. R. (2013). Effect of chitosan and oortho phenyl phenol coating on shelf life of Thompson orange. Journal of Innovation in Food Science and Technology, 5(1): 71-78. (in Persion).
3. Khoshtaghaza, M. H., **Taghinezhad, E.** (2017). Investigation effect of particle Nano coating on storage quality properties of Thomson orange. Journal of Food Science & Technology, 61(13): 113-125. (in Persion).
4. **Taghinezhad, E.** 2017. Application of Response Surface Methodology (RSM) for Optimization of Parboiling Indicators and Prediction of Head Rice Yield. Agricultural Mechanization and Systems Research, 18 (68): 59-70. (in Persion).
5. **Taghinezhad, E.**, Khoshtaghaza, M. H., Motevali, A. (2018). Investigation of drying parameters of parboiled paddy and the effect of combined hot air - infrared drier on head rice yield (Case study: Fajr cultivar). Journal of Food Science and Technology, 74 (15): 223-234. (in Persion).
6. **Taghinezhad, E.** and Rasooli Sharabiani, V. (2018). Prediction of Starch Gelatinization Degree and Some Quality Properties of Parboiled Rice (Shiroudi Cultivar) During Steaming of Parboiling Process. Journal of Food Science and Technology, 77 (15): 183-192. (in Persion).
7. **Taghinezhad, E.** and Rasooli Sharabiani, V. The effect of combination dryer of hot air – infrared and microwave on some quality properties of parboiled rice. Journal of Innovative Food Technologies, 5 (17): 183-192. (in Persion).
8. Motevali, A; **Taghinezhad, E.** and Hashemi, S. J. (2017). Investigation of energy parameters, environment and social costs for drying process (Case study: Apple slices). Agricultural Mechanization and Systems Research, Under press. (in Persion).
9. Rasooli Sharabiani, V. Farhangi, O. and **Taghinezhad, E.** (2019). Online identifying of defect bottles in production line of Soft drink using machine vision. Journal of Agricultural Machinery, Vol. 9, No. 1, Spring. (in Persion).
10. **Taghinezhad, E.** and Kaveh, M. (2020). Evaluation of some thermodynamic and physical properties of garlic different thickness under drying by microwave method with ultrasonic pretreatment. Journal of Innovative Food Technologies (JIFT), 7 (4): 641-657.
11. Kiapey, A., **Taghinezhad, E.**, Ghasemi-Varnamkhasti, M. and Bahrami, M. (2020). Exergy Analysis for Parboiled Paddy Drying in Infrared - Hot Air Combined Dryer. Journal of Innovative Food Technologies (JIFT), 7 (3): 447-460.
12. Fazeli burestan, N., Afkari siyyah, A. H. and **Taghinezhad, E.** (2020). Predicting Some Quality Properties of Different White Rice Varieties by Image Processing Technology. Journal of Innovative Food Technologies (JIFT), 8 (1): 1- 11.
13. **Taghinezhad, E.** and Kaveh, M. (2020). Modeling and Optimization of Specific Energy Consumption and Green House Gas Emissions During Drying of Organic Blackberry with Different Pretreatments by Response Surface Methodology. Iranian journal of Biosystem engineering, 51 (2): 351-369.

14. Taghinezhad, E., Khoshtaghaza, M. H., Minaei, S. and Latifi, A. (2015). "Effect of Soaking Temperature and Steaming Time on the Quality of Parboiled Iranian Paddy Rice". International Journal of Food Engineering, doi:10.1515/ijfe-2014-0296.
15. Taghinezhad, E., Khoshtaghaza, M. H., Suzuki, T., Minaei, S. and Brenner, T. (2015). "Quantifying the relationship between rice starch gelatinization and moisture-electrical conductivity of paddy during soaking". Journal of Food Process Engineering, doi:10.1111/jfpe.12235.
16. Banakar, A. and Taghinezhad, E. (2014). An Electronic Device for Controlling of Diesel Engines Temperature. Consumer Electronics Times, 3(1): 202-205.
17. Taghinezhad, E., Khoshtaghaza, M. H., Minaei, S., Suzuki, T. and Brenner, T. (2016). The relationship between degree of starch gelatinization and quality attributes of parboiled rice during steaming. Rice Science, 23(6): 339–344.
18. Taghinezhad, E. and Brenner, T. (2016). Mathematical modeling of starch gelatinization and some quality properties of parboiled rice based on parboiling indicators using RSM. Journal of food process engineering. DOI 10.1111/jfpe.12483.
19. Taghinezhad, E. Ebadollahi, A. (2017). Potential application of chitosan-clay coating on some quality properties of Lemon during storage. Agricultural Engineering International: CIGR Journal, 19 (3): 189- 194.
20. Kaveh, M.; Abbaspour-Gilandeh, Y.; Amiri Chayjan, R.; Taghinezhad, E. & Mohammadigol, R. (2018). Mass transfer, physical, and mechanical characteristics of terebinth fruit (*Pistacia atlantica* L.) under convective infrared microwave drying. Heat and Mass Transfer, Doi: 10.1007/s00231-018-2287-5.
21. Taghinezhad, E. and Rasooli Sharabiani, V. (2018). Effect of Chitosan Coating on Some Quality Properties of Thomson Orange during Storage (A case study in Iran). Agricultural Engineering International: CIGR Journal, 20 (1): 157- 161.
22. JahediRad, SH., Kaveh, M., Rasooli Sharabiani, V. and Taghinezhad, E. (2018). Fuzzy logic, artificial neural network and mathematical model for prediction of white mulberry drying kinetics. Heat and Mass Transfer, Doi: 10.1007/s00231-018-2377-4.
23. Kaveh, M., Rasooli Sharabiani, V., Amiri Chayjan, R., Taghinezhad, E., Abbaspour-Gilandeh, Y. and Golpour, I. (2018). ANFIS and ANNs model for prediction of moisture diffusivity and specific energy consumption potato, garlic and cantaloupe drying under convective hot air dryer. Information processing in agriculture, Doi: 10.1016/j.inpa.2018.05.003.
24. Ebadollahi, A., Taghinezhad, E. and Davari, M. (2018). Optimization of the Antifungal Activity of Essential Oil Isolated from Aerial Parts of *Thymus kotschyanus* Boiss & Hohen (Lamiaceae). J. Appl. Sci. Environ. Manage, 22 (6) 907 –910.
25. Taghinezhad, E., Rasooli Sharabiani, V. and Kaveh, M. (2018). Modelling and Optimization of Hybrid HIR Drying Variables for Processing of Parboiled Paddy Using Response Surface Methodology. Iranian Journal of Chemistry and Chemical Engineering, 28 (4): 251-260. ([http://www.ijcce.ac.ir/article\\_31861.html](http://www.ijcce.ac.ir/article_31861.html)).
26. Kaveh, M., Jahanbakhshi, A., Abbaspour-Gilandeh, Y., Taghinezhad, E. and Farshbaf Moghimi, M. B. (2018). The effect of ultrasound pre-treatment on quality, drying, and thermodynamic attributes of almond kernel under convective dryer using ANNs and ANFIS network. Journal of food process engineering. DOI: 10.1111/jfpe.12868.
27. Kaveh, M., Amiri Chayjan, R., Taghinezhad, E., Abbaspour Gilandeh, Y., Younesi, A. and Rasooli Sharabiani, V. (2019). Modeling of thermodynamic properties of carrot

- product using ALO, GWO, and WOA algorithms under multi-stage semi-industrial continuous belt dryer. *Engineering with Computers*, <https://doi.org/10.1007/s00366-018-0650-2>.
28. Sharabiani, V. and Taghinezhad, E. (2019). Quantifying of the relationship between novel Intermittent drying variables and some quality properties of parboiled rice using response surface methodology. *Chemical Industry & Chemical Engineering Quarterly*, DOI: 10.2298/ciceq170813033s.
  29. Alaei, B.; Dibagar, N.; Amiri Chayjan, R.; Kaveh, M. and Taghinezhad, E. (2018). The effect of short and medium infrared radiation on some drying and quality characteristics of quince slices under vacuum condition. *Quality Assurance and Safety of Crops & Foods*, 10 (4): 371-381.
  30. Jahanbakhshi, A.; Rasooli Sharabiani, V.; Heidarbeigi, K.; Kaveh, M. and Taghinezhad, E. (2019). Evaluation of engineering properties for waste control of tomato during harvesting and postharvesting. *Food Science & Nutrition*, 1473-1481.
  31. Rasooli Sharabiani, V. Soltani Nazarloo, A. and Taghinezhad, E. (2019). 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. *Yuzuncu Yil University Journal of Agricultural Sciences*, DOI: 10.29133/yyutbd.447926.
  32. Kisalaei, A.; Rasooli Sharabiani, V. and Taghinezhad, E. (2019). Application of image processing and linear regression models for estimation of nitrogen content of tomato leaves. *Research on Crops*, 20 (2): 345-352.
  33. Ebadollahi, A. and Taghinezhad, E. (2019). Modeling and optimization of the insecticidal effects of *Teucrium polium* L. essential oil against red flour beetle (*Tribolium castaneum* Herbst) using response surface methodology. *Information Processing In Agriculture*, DOI: 10.1016/j.inpa.2019.08.004.
  34. Ebrahimpour1, Z.; Rasooli sharabiani, V. and Taghinezhad, E. (2019). Modeling of Energy Consumption of Cucumber Greenhouses using Artificial Neural Network and ANFIS. *Emirates Journal for Engineering Research*, 23 (1), 7-19.
  35. Taghinezhad, E.; Kaveh, M.; Shimizu, N.; Kumar, A. and Szumny, A.; Rasooli Sharabiani, V. (2020). Drying of Parboiled Paddy with Different Dryer: Investigation of Thermodynamic and Quality Properties, Mathematical Modeling using ANNs. *Foods*. 9(1), 86; <https://doi.org/10.3390/foods9010086>.
  36. Ghaghelestany, A. B., Jahanbakhshi, A., Taghinezhad, E. (2020). Gene transfer to German chamomile (*L. chamomilla* M) using cationic carbon nanotubes. *Scientia Horticulturae*. 263: 109106.
  37. Taghinezhad, E., Kaveh, M. Jahanbakhshi, A. and Golpour, I. (2020). Use of artificial intelligence for the estimation of effective moisture diffusivity, specific energy consumption, color and shrinkage in quince drying. *Journal of food process engineering*, DOI: 10.1111/jfpe.13358.
  38. Fazeli Burestan, N., Afkari Sayyah, A. H., Taghinezhad, E., and Safi, M. (2019). Prediction of some chemical and physicochemical properties of white rice grain samples using near-infrared spectroscopy (NIRS) analysis. *Innovative Food Technologies*, [http://jift.irost.ir/article\\_828.html](http://jift.irost.ir/article_828.html).
  39. Kaveh, M., Amiri Chayjan, R., Taghinezhad, E., Rasooli Sharabiani, V., Motevali, A. (2020). Evaluation of specific energy consumption and GHG emissions for different



- drying methods (Case study: Pistacia Atlantica). *Journal of Cleaner Production*, Volume 259, <https://doi.org/10.1016/j.jclepro.2020.120963>.
40. Jahanbakhshi, A., Kaveh, M., **Taghinezhad, E.**, Rasooli Sharabiani, V. (2020). Assessment of kinetics, effective moisture diffusivity, specific energy consumption, shrinkage, and color in the pistachio kernel drying process in microwave drying with ultrasonic pretreatment. *Journal of Food Processing and Preservation*, <https://doi.org/10.1111/jfpp.14449>.
  41. Taghinezhad, E., Kaveh, M., Khalife, E., & Chen, G. (2020). Drying of organic blackberry in combined hot air- infrared dryer with ultrasound pretreatment. *Drying Technology*, <https://doi.org/10.1080/07373937.2020.1753066>.
  42. Kaveh, M., **Taghinezhad, E.** and Aziz, M. (2020). Effects of physical and chemical pretreatments on drying and quality properties of blackberry (*Rubus* spp.) in hot air dryer. *Food Science & Nutrition*, 8, 3843–3856.
  43. Fazeli Burestan, N., Afkari Sayyah, A. H. and **Taghinezhad, E.** (2020). Mathematical modeling for the prediction of some quality parameters of white rice based on the strength properties of samples using response surface methodology (RSM). *Food Science & Nutrition*, 8: 4134 – 4144.
  44. Samuel, O. D., Okwu, M. O., Oyejide, O. J., **Taghinezhad, E.**, Afzal, A. and Kaveh, M. (2020). Optimizing biodiesel production from abundant waste oils through empirical method and grey wolf optimizer. *Fuel*, <https://doi.org/10.1016/j.fuel.2020.118701>.
  45. Fazeli Burestan, N., Afkari Sayyah, A. H. and **Taghinezhad, E.** (2020). Prediction of some quality properties of rice and its flour by near-infrared spectroscopy (NIRS) analysis. *Food Science & Nutrition*, 9:1099–1105.
  46. Soltani Nazarloo, A.; Rasooli Sharabiani, V.; Abbaspour Gilandeh, Y.; **Taghinezhad, E.**; Szymanek, M.; Sprawka, M. (2021). Feasibility of Using VIS/NIR Spectroscopy and Multivariate Analysis for Pesticide Residue Detection in Tomatoes. *Processes*, 9(2):196. <https://doi.org/10.3390/pr9020196>.
  47. **Taghinezhad, E.**; Kaveh, M.; Szumny, A. (2021). Optimization and Prediction of the Drying and Quality of Turnip Slices by Convective-Infrared Dryer under Various Pretreatments by RSM and ANFIS Methods. *Foods*, 10(2), 284; <https://doi.org/10.3390/foods10020284>.
  48. **Taghinezhad, E.**; Kaveh, M.; Szumny, A. (2021). Thermodynamic and Quality Performance Studies for Drying Kiwi in Hybrid Hot Air- Infrared Drying with Ultrasound Pretreatment. *Appl. Sci.* 11(3), 1297; <https://doi.org/10.3390/app11031297>
  49. Kaveh, M.; Abbaspour-Gilandeh, Y.; **Taghinezhad, E.**; Witrowa-Rajchert, D.; Nowacka, M. (2021). The Quality of Infrared Rotary Dried Terebinth (*Pistacia atlantica* L.)-Optimization and Prediction Approach Using Response Surface Methodology. *Molecules*, 26(7), 1999; <https://doi.org/10.3390/molecules26071999>.
  50. Nazarloo, A.S., Sharabiani, V.R., Gilandeh, Y.A., **Taghinezhad, E.**, and Szymanek, M. (2021). Evaluation of Different Models for Non-Destructive Detection of Tomato Pesticide Residues Based on Near-Infrared Spectroscopy. *Sensors*. 21, 3032.
  51. Ebadollahi, A., **Taghinezhad, E.**, Setzer, W. N. and Chen, G. (2021). Susceptibility of *Tribolium castaneum* (Coleoptera: Tenebrionidae) to the Fumigation of Two Essential Satureja Oils: Optimization and Modeling. *Processes*, 9, 1243. <https://doi.org/10.3390/pr9071243>.

52. Askari, M., Abbaspour-Gilandeh, Y., Taghinezhad, E., El Shal, A. M., Hegazy, R. and Okasha, M. (2021). Applying the Response Surface Methodology (RSM) Approach to Predict the Tractive Performance of an Agricultural Tractor during Semi-Deep Tillage. *Agriculture*, 11, 1043. <https://doi.org/10.3390/agriculture11111043>.
53. Rasooli Sharabiani, V., Kaveh, K., Taghinezhad, E., Abbaszadeh, R., Khalife, E., Szymanek, M. and Dziwulska-Hunek, A. (2022). Application of Artificial Neural Networks, Support Vector, Adaptive Neuro-Fuzzy Inference Systems for the Moisture Ratio of Parboiled Hulls. *Applied Science*, 12, 1771, <https://doi.org/10.3390/app12041771>
54. Kaveh, M., Taghinezhad, E., Witrowa-Rajchert, D., Imanian, K., Khalife, E. and Nowacka, M. (2022). Use of ultrasound pre-treatment before microwave drying of kiwifruits –An optimization approach with response surface methodology. *Journal Food Processing and Preservation*, <https://doi.org/10.1111/jfpp.16714>.
55. Askari, M., Abbaspour-Gilandeh, Y., Taghinezhad, E., Hegazy, R. and Okasha, M. (2022). Prediction and optimizing the multiple responses of the overall energy efficiency (OEE) of a tractor-implement system using response surface methodology. *Journal of Terramechanics*, 103, 11-17.
56. Sharabiani, V.R., Nazarloo, A.S., Taghinezhad, E., Veza, I., Szumny, A., and Figiel, A. (2022). Prediction of winter wheat leaf chlorophyll content based on VIS/NIR spectroscopy using ANN and PLSR. *Food Science and Nutrition*. 00:1–10. DOI: 10.1002/fsn3.3071.
57. Taghinezhad, E., Szumny, A., & Figiel, A. (2023). The Application of Hyperspectral Imaging Technologies for the Prediction and Measurement of the Moisture Content of Various Agricultural Crops during the Drying Process. *Molecules*, 28(7), 2930
58. Aghdamifar, E., Rasooli Sharabiani, V., Taghinezhad, E., Rezvanivand Fanaei, A., & Szymanek, M. (2023). Non-destructive method for identification and classification of varieties and quality of coffee beans based on soft computing models using VIS/NIR spectroscopy. *European Food Research and Technology*, 1-14.
59. Żołnierczyk, A. K., Pachura, N., Bąbelewski, P., & Taghinezhad, E. (2023). Sensory and Biological Activity of Medlar (*Mespilus germanica*) and Quince ‘Nivalis’ (*Chaenomeles speciosa*): A Comparative Study. *Agriculture*, 13(5), 922.
60. Askari Asli-Ardeh, E., Taghizadeh, G., & Taghinezhad, E. (2022). Investigating the Effect of Some Operating Factors on the Performance of a Laboratory Cluster Threshing Machine—Case Study: Two Barley Varieties. *Biomechanism and Bioenergy Research*, 1(2), 86-92.
61. Teymori-Omran, M., Askari Asli-Ardeh, E., Taghinezhad, E., Motevali, A., Szumny, A. and Nowacka, M. (2023). Enhancing Energy Efficiency and Retention of Bioactive Compounds in Apple Drying: Comparative Analysis of Combined Hot Air–Infrared Drying Strategies. *Applied Sciences*, 13(13), p.7612.
62. Aghdamifar, E., Sharabiani, V.R., Taghinezhad, E., Szymanek, M. and Dziwulska- Hunek, A. (2023). E-Nose as a Non-destructive and Fast Method for Identification and Classification of Coffee Beans Based on Soft Computing Models. *Sensors and Actuators B: Chemical*, p.134229.
63. Taghinezhad, E., Kaveh, M., Szumny, A. and Figiel, A. (2023). Quantifying of the Best Model for Prediction of Greenhouse Gas Emission, Quality, and Thermal Property Values during Drying Using RSM (Case Study: Carrot). *Applied Sciences*, 13(15), p.8904.

64. **Taghinezhad, E. \***, Kaveh, M., Szumny, A., Figiel, A. and Blasco, J. (2023). Qualitative, energy and environmental aspects of microwave drying of pre- treated apple slices. Scientific reports. Scientific Reports, 13(1), 16152.
65. **Taghinezhad, E.**; Sharabiani, V.R.\*; Shahiri, M.; Moinfar, A.; Szumny, A\*. (2023). Predicting Quality Properties of Pears during Storage Using Hyper Spectral Imaging System. Agriculture, 13(10), 1913.
66. Shojaeian, A., Bagherpour, H.\*, Bagherpour, R., Parian, J. A., Fatehi, F., & **Taghinezhad, E.** (2023). The Potential Application of Innovative Methods in Neural Networks for Surface Crack Recognition of Unshelled Hazelnut. *Journal of Food Processing and Preservation*. <https://doi.org/10.1155/2023/2177724>.
67. Nezhad, H. L., Sharabiani, V. R., Tarighi, J., Tahmasebi, M., **Taghinezhad, E.**, & Szumny, A. (2024). Energy Flow Analysis in Oilseed Sunflower Farms and Modeling with Artificial Neural Networks as Compared to Adaptive Neuro-Fuzzy Inference Systems (Case Study: Khoy County). *Energies*, 17(11), 2795.
68. Samandari, K., Fathi-Achachlouei, B., Azadmard-Damirchi, S., Borhanian, J., **Taghinezhad, E.**, & Szumny, A. (2024). Effect of Cold Plasma-Treated Turmeric on the Oxidative Stability and Quality of the Oil From the Milk Thistle Seeds. *Journal of Food Processing and Preservation*, 2024(1), 3011121.
69. **Taghinezhad, E.**, Szumny, A., Figiel, A., Amoghin, M. L., Mirzazadeh, A., Blasco, J., ... & Castillo-Gironés, S. (2025). The potential application of HSI and VIS/NIR spectroscopy for non-invasive detection of starch gelatinization and head rice yield during parboiling and drying process. *Journal of Food Composition and Analysis*, 142, 107443.

#### **International Conference:**

1. **Taghinezhad, E.\***, Szumny, A., Figiel, A. (2022). Application of hyperspectral imaging in drying of agricultural products. 4th Nordic Baltic Drying Conference, Wroclaw, Poland.
2. **Taghinezhad, E.\***, Rasooli Sharabiani, V., Shahiri, M., Moinfar, A., & Szumny, A. (2023). Predicting quality properties of pears during storage using hyper spectral imaging system. SensorFINT conference & AK Chemometrik und Qualitätssicherung Annual Workshop, Berlin, Germany.
3. **Taghinezhad, E.\***, Szumny, A., Figiel, A. (2024). Assessment of starch gelatinization degree and moisture content in paddy during the soaking stage of parboiling using response surface methodology. 10th International Conference on "Quality And Safety In Food Production Chain", Wroclaw, Poland.

#### **National research projects with Funding received:**

**All of the following research projects has been financially supported by the office of vice chancellor for research at university of Mohaghegh Ardabili in Iran:**

1. Modeling the effects of soaking temprature and steaming time on starch gelatinization degree of parboiled rice. (Finished at 2015). 1,185.55 Euro.
2. Evaluation of drying kinetics and head rice yield of parboiled rice for infrared - hot air combination drier and microwave. (Finished at 2016). 1,043.55 Euro.
3. Online determination of starch gelatinization degree of parboileed rice by measurement of dielectrice constant of paddy water during soaking (2017). 2,323.68 Euro.
4. The effect of different pretreatments on drying, thermodynamic and green house emmision gas under various dryer using ANNs and ANFIS networks (Case study: Black berry).



- (2018). 1,453.96 Euro.
5. Modeling and optimization of specific energy consumption and Green House Gas emissions during drying of organic blackberry with different pretreatments by response surface methodology. (2019). 1,422.66 Euro.
  6. The effect ultrasonic pretreatments on drying kinetic, energy, exergy and green house emission gas of garlic under microwave dryer. (2019). 1,778.32 Euro.
  7. The effect of different pre-treatments on the qualitative and thermodynamic properties of turnips in hot air and microwave dryers and predicting using ANFIS and RSM models. (2020). 2,039.15 Euro.
  8. Using metaheuristic algorithms to predict the qualitative and thermodynamic properties of kiwifruit in hot air and microwave dryers with ultrasonic pretreatment. (2021). 2,039.15 Euro.
  9. Prediction of berry's quality using NIR spectral technique during hot air drying process. (2021). 2,845.32 Euro.
  10. Non-Destructive Quality Characterization of Peach Fruit Using Vis / NIR Spectroscopy and Multivariate Analyzing. (2022). 2,845.32 Euro.

**International research projects with Funding received:**

*The Potential Application of Hyper Spectral Imaging (HSI) for Non-destructively Detection and Monitoring of Quality and Chemical Properties of Parboiled Paddy during Drying*, supported by the Polish National Agency for Academic Exchange with a **NAWA-Ulam** contract with a number of BPN/ULM/2021/1/00231/U/00001, under supervision of Prof. Antoni Szumny. (2021).

**National Patents:**

Title of the patent	Patent date	patent number
Designing and manufacture of the temperature control system of agricultural diesel engine	16-03-2009	387121329
Manufacture of device for artificial pollination of kiwi	20-12-2010	67979
Designing a device equipped with a loading and unloading system for all kinds of fertilizers that be used in citrus gardens	06-12-2010	67745
Design of New canvas sprayers for citrus gardens	06-12-2010	67756
Real-time measurement system of electrical conductivity of paddy water during soaking in parboiling process	02-10-2016	90032

### **Journal Referee**

- 1. Journal of Cereal Science**
- 2. Journal of Food Measurement and Characterization**
- 3. Journal of Food Process Engineering**
- 4. Food Reviews International**
- 5. International Journal of Food Properties**
- 6. Engineering in Agriculture, Environment and Food**
- 7. Iranian Journal of Chemistry and Chemical Engineering**
- 8. Food Chemistry**
- 9. Foods**

### **Award:**

Receiving a scholarship from University of Mohaghegh Ardabili at 2012-2015.

Receiving a scholarship from University of Mohaghegh Ardabili for researcher at Tokyo University of Marine Science & Technology, in Department of food science and technology, With Prof. Toru Suzuki, Japan at 2014-2015.

Receiving a Post-Doc fellowship from Polish National Agency for Academic Exchange (NAWA) at 2022 - 2024 with No. BPN/ULM/2021/1/00231/U/00001. Awarding of 85000 Euro.

Awarding of 2000 Euro by Second 2024 Call for STSM (Short term scientific missions) with number CA19145 for staying in Instituto Valenciano de Investigaciones Agrarias (IVIA), Spain.