



## CURRICULUM VITAE

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### *Personal details*

*Name:* Mortaza

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*Date of birth:* 05.22.1982

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### *Educational qualifications*

1. Ph. D. in *Mechanics of Agricultural Machinery Engineering*, 2.12.2012, University of Tehran, Karaj, Iran.
2. M.Sc. in *Mechanics of Agricultural Machinery Engineering*, GPA: 18.25 out 20 (thesis: 19.80), 9.21.2008, University of Tehran, Karaj, Iran.
3. B.Sc. in *Agricultural Machinery Engineering*, GPA: 16.92 out 20, 9.22.2006, Tabriz University, Tabriz, Iran.
4. Ranked second among B.Sc. Students of Department, 2002–2006
5. Ranked second among M.Sc. Students of Department, 2006–2008
6. Ranked second among PhD Students of Department, 2008–2012

7. Six months of research trainee at the Institute of Agricultural Engineering of University Hohenheim, Stuttgart, Germany under supervision of Prof. Joachim Müller (2010–2011).

### *Theses title*

M.Sc. *Development and evaluation of semi-industrial continuous band dryer appropriate for small fruit and vegetable based on thin-layer drying.* Supervisor: Dr. M.H. Kianmehr, Advisors: Dr. A. Arabhosseini, and Dr. S.R. Hassan-Beygi.

Ph.D. *Modeling, optimization, and exergetic analysis of fish oil microencapsulation process by spray drying.* Supervisor: Dr. H. Mobli, Advisors: Dr. A. Madadlou, and Dr. Sh. Rafiee.

### *Awards*

–Received University of Tehran’s award for Excellence in Research (2008).

–Received University of Tehran’s award for Excellence in Research (2012).

–Member of Iranian National Elite Foundation (2009–present)

–Member of University of Tehran committee of talent student (2008)

### *Scientific publications*

Author ID in Scopus: 23970202200

1) **Aghbashlo, M.** (2015). A proposed mathematical model for exergy analysis of an infrared (IR) drying process. *International Journal of Exergy*, Accepted Manuscript.

2) **Aghbashlo, M.**, Müller, J., Mobli, H., Madadlou, A., & Rafiee, S. (2014). Modeling and simulation of deep-bed solar greenhouse drying of chamomile flowers. *Drying Technology*, Accepted Manuscript.

- 3) Hosseinpour, S., Rafiee, S., **Aghbashlo, M.**, & Mohtasebi, S. S. (2014). A novel image processing approach for in-line monitoring of visual texture during shrimp drying. *Journal of Food Engineering*, 143, 154–166.
- 4) Hosseinpour, S., Rafiee, S., **Aghbashlo, M.**, & Mohtasebi, S.S. (2014). Computer vision system (cvs) for in-line monitoring of visual texture kinetics during shrimp (*Penaeus spp.*) drying. *Drying Technology*, 33, 238–254.
- 5) **Aghbashlo, M.**, Hosseinpour, S., & Ghasemi-Varnamkhashti, M. (2014). Computer vision technology for real-time food quality assurance during drying process. *Trends in Food Science & Technology*, 39(1), 76–84.
- 6) Ghasemi-Varnamkhashti, M., & **Aghbashlo, M.** (2014). Electronic nose and electronic mucosa as innovative instruments for real-time monitoring of food dryers. *Trends in Food Science & Technology*, 38(2), 158–166.
- 7) Nadian M.H., Rafiee, Sh., **Aghbashlo, M.**, Hosseinpour, S. & Mohtasebi, S.S. (2014). Continuous real-time monitoring and neural network modelling of apple slices color changes during hot air drying. *Food and Bioproduct Processing*, doi:10.1016/j.fbp.2014.03.005.
- 8) **Aghbashlo, M.**, Sotudeh-Gharebagh, R., Zarghami, R., Mujumdar, A.S. & Mostoufi, N. (2014). Measurement techniques to monitor and control fluidization quality in fluidized bed dryers—A review. *Drying Technology*, 32(9), 1005–1051.
- 9) **Aghbashlo, M.**, Mobli, H., Rafiee, Sh. & Madadlou, A. (2013). A review on exergy analysis of drying processes and systems. *Renewable & Sustainable Energy Reviews*, 22, 1–22.
- 10) **Aghbashlo, M.**, Mobli, H., Madadlou, A. & Rafiee, Sh. (2013). Fish oil microencapsulation as influenced by spray dryer operational parameters. *International Journal of Food Science and Technology*, 48(8), 1707–1713.
- 11) **Aghbashlo, M.**, Mobli, H., Rafiee, Sh. & Madadlou, A. (2013). An artificial neural network for predicting the physiochemical properties of fish oil microcapsules obtained by spray drying. *Food Science and Biotechnology*, 22(3), 677–685.

- 12) **Aghbashlo, M.**, Mobli, H., Madadlou, A. & Rafiee, Sh. (2013). Influence of wall material and inlet drying air temperature on the microencapsulation of fish oil by spray drying. *Food Bioprocess and Technology*, 6(6), 1561–1569.
- 13) Hosseinpour, S., Rafiee, Sh., Mohtasebi, S.S. & **Aghbashlo, M.** (2013). Application of computer vision technique for on–line monitoring of shrimp color changes during drying. *Journal of Food Engineering*, 115(1), 99–114.
- 14) Khanali, M., **Aghbashlo, M.**, Rafiee, Sh. & Jafari, A. (2013). Exergetic performance assessment of plug flow fluidized bed drying process of rough rice. *International Journal of Exergy*. 13(3), 387–408.
- 15) Nazghelichi, T., Jafari, A., Kianmehr, M. H., & **Aghbashlo, M.** (2013). CFD simulation and optimization of factors affecting the performance of a fluidized bed dryer. *Iranian Journal of Chemistry and Chemical Engineering*, 32(4), 81–92.
- 16) **Aghbashlo, M.**, Mobli, H., Madadlou, A. & Rafiee, Sh. (2012). The correlation of wall material composition with flow characteristics and encapsulation behavior of fish oil emulsion. *Food Research International*, 49(1), 379–388.
- 17) **Aghbashlo, M.**, Mobli, H., Rafiee, Sh. & Madadlou, A. (2012). Influence of spray dryer parameters on exergetic performance of microencapsulation process. *Intentional Journal of Exergy*, 10(3), 267–289.
- 18) **Aghbashlo, M.**, Mobli, H., Madadlou, A. & Rafiee, Sh. (2012). Energy and exergy analyses of the spray drying process of fish oil microencapsulation. *Biosystems Engineering*, 111(2), 229–241.
- 19) **Aghbashlo, M.**, Mobli, H., Rafiee, Sh. & Madadlou, A. (2012). Optimization of emulsification procedure for mutual maximizing the encapsulation and exergy efficiencies of fish oil microencapsulation. *Powder Technology*, 225, 107–117.
- 20) **Aghbashlo, M.**, Mobli, H., Madadlou, A. & Rafiee, Sh. (2012). Integrated optimization of fish oil microencapsulation process by spray drying. *Journal of Microencapsulation*, 29(8), 790–804.
- 21) **Aghbashlo, M.**, Mobli, H., Rafiee, Sh. & Madadlou, A. (2012). The use of artificial neural network to predict exergetic performance of spray drying process: A preliminary study. *Computers and Electronics in Agriculture*, 88, 32–43.

- 22) Nazghelichi, T., **Aghbashlo, M.**, Kianmehr, M.H. & Omid, M. (2011). Prediction of energy and exergy of carrot cubes in a fluidized bed dryer by artificial neural networks. *Drying Technology*, 29, 295–307.
- 23) **Aghbashlo, M.**, Kianmehr, M.H., Nazghelichi, T. & Rafiee, Sh. (2011). Optimization of an artificial neural network topology for predicting drying kinetics of carrot cubes using combined response surface and genetic algorithm. *Drying Technology*, 29, 770–779.
- 24) **Aghbashlo, M.**, Kianmehr, M.H., Arabhosseini, A. & Nazghelichi, T. (2011). Modeling of carrot thin-layer drying in a semi-industrial continuous band dryer. *Czech Journal of Food Sciences*, 29 (5), 528–538.
- 25) Nazghelichi, T., **Aghbashlo, M.** & Kianmehr, M.H. (2011). Optimization of an artificial neural network topology using coupled response surface methodology and genetic algorithm for fluidized bed drying. *Computers and Electronics in Agriculture*, 75(1), 84–91.
- 26) Nazghelichi, T., Kianmehr, M.H. & **Aghbashlo, M.** (2011). Prediction of carrot cubes drying kinetics during fluidized bed drying by artificial neural network. *Journal of Food Science and Technology*, 48(5), 542–550.
- 27) **Aghbashlo, M.**, Kianmehr, M.H. & Arabhosseini, A. (2010). Modeling of Thin-Layer Drying of Apple Slices in a Semi-Industrial Continuous Band Dryer. *International Journal of Food Engineering*, 6, (4), Article 1.
- 28) Nazghelichi, T., Kianmehr, M.H. & **Aghbashlo, M.** (2010). Thermodynamic analysis of fluidized bed drying of carrot cubes. *Energy*, 12, 4679–4684.
- 29) **Aghbashlo, M.**, Kianmehr, M.H. & Hassan-Beygi, S.R. (2010). Drying and rehydration characteristics of sour cherry (*Prunus Cerasus L.*). *Journal of Food Processing and Preservation*, 34, 351–365.
- 30) Amin-Nayyeri, M. Kianmehr, M.H., Arabhosseini, A., Hassan-Beygi, S.R. & **Aghbashlo, M.** (2010). Drying behavior and mathematical modeling of dairy cattle manure in a convective dryer. *Applied Engineering in Agriculture*, 26(4), 689–697.

- 31) **Aghbashlo, M.**, Kianmehr, M.H., Khani, S. & Ghasemi, M. (2009). Mathematical modelling of thin-layer drying of carrot. *International Agrophysic*, 23, 313–317.
- 32) Hassan-Beygi, S.R., **Aghbashlo, M.**, Kianmehr, M.H. & Massah, J. (2009). Drying characteristics of walnut (*Juglans regia* L) during convection drying. *International Agrophysic*, 23(2), 129–135.
- 33) **Aghbashlo, M.**, Kianmehr, M.H. & Arabhosseini, A. (2009). Modeling of thin-layer drying of potato slices in length of continues band dryer. *Energy Conversion and Management*, 50 (5), 1348–1355.
- 34) **Aghbashlo, M.**, Kianmehr, M.H. & Arabhosseini, A. (2009). Performance analysis of drying of carrot slices in a semi-industrial continuous band dryer. *Journal of Food Engineering*, 91, 99–108.
- 35) **Aghbashlo, M.**, Kianmehr, M.H. & Samimi-Akhijahani, H. (2008). Evaluation of thin-layer drying models for describing drying kinetics of Barberries (*Barberies Vulgaris*). *Journal of Food Process Engineering*, 32(2), 278–293.
- 36) **Aghbashlo, M.**, Kianmehr, M.H. & Arabhosseini, A. (2008). Energy and exergy analyses of thin layer drying of potato slices in a semi-industrial continuous band dryer. *Drying Technology*, 26, 1501–1508.
- 37) **Aghbashlo, M.**, Kianmehr, M.H. & Samimi-Akhijahani, H. (2008). Influence of drying conditions on the effective moisture diffusivity, energy of activation and energy consumption during the thin-layer drying of berberis fruit (*Berberidaceae*). *Energy Conversion and Management*, 49, 2865–2871.
- 38) **Aghbashlo, M.**, Kianmehr, M.H. & Hassan-Beygi, S.R. (2008). Specific Heat and Thermal Conductivity of Berberis Fruit (*Berberis vulgaris*). *American Journal of Agricultural and Biological Sciences*, 3(1), 330–336.

### ***Congress and meeting papers***

- 1) **Aghbashlo, M.**, Kianmehr, M.H., Arabhosseini, A., Samimi-Akhijahani, H. & Mehravar, H. (2008). Hot air drying kinetics of walnut (*Juglans regia* L.). The 5<sup>th</sup> biannual congress of agricultural

machinery engineering and mechanization. Ferdowsi University of Mashhad, Iran. 28–29<sup>th</sup> Aug. (In Persian).

2) **Aghbashlo M.**, Kianmehr, M.H., Arabhosseini, A., Samimi–Akhijahani, H. & Mehravar, H. (2008). Evaluation of drying models to describe the drying kinetics of barberries. The 5<sup>th</sup> biannual congress of agricultural machinery engineering and mechanization. Ferdowsi University of Mashhad, Iran. 28–29<sup>th</sup> Aug. (In Persian).

3) Mehravar, H., Kianmehr, M.H., **Aghabshlo, M.**, Arabhosseini, A. & H. Samimi Akhijahani. Mathematical modelling of thin layer drying of sour cherries (*Prunus cerasus* L.). The 5<sup>th</sup> biannual congress of agricultural machinery engineering and mechanization. Ferdowsi University of Mashhad, Iran. 28–29<sup>th</sup> Aug. (In Persian).

4) Nazghelichi, T., Kianmehr, M.H., **Aghabshlo, M.** & Arabhosseini, A. Mathematical modeling of thin–layer drying of carrot slices in length of continuous dryer. The 5<sup>th</sup> biannual congress of agricultural machinery engineering and mechanization. Ferdowsi University of Mashhad, Iran. 28–29<sup>th</sup> Aug. (In Persian).

5) Mirzaee, E., Rafiee, Sh., Keyhani, A., **Aghbashlo, M.** & Mirzaee, F. (2010) Modulus of elasticity (E) and total soluble solids (TSS) effect on drying characteristics of two apricot varieties. The 6<sup>th</sup> biannual congress of agricultural machinery engineering and mechanization. University of Tehran, Iran. 15–16<sup>th</sup> Sep. (In Persian).

## ***Scientific contributions***

Reviewer for *International Journal of Exergy*, *Journal of Food Engineering*, *Energy*, *Applied Engineering in Agriculture*, *Biosystems Engineering*, *Journal of Food Processing and Preservation*, *Journal of Food Process Engineering*, *Transaction of ASABE*, *Chemical Engineering Communication*, *Drying Technology*, *Computer and Electronic in Agriculture*, and *Journal of Food Science and Technology*

## *Working Experience*

–More than 600 hours working in Novitiate Period in Tabriz Tractor Manufacturing Company, Summer 2006.

## *Teaching Areas*

### Graduate Courses:

- Exergy
- Advanced Thermodynamics
- Bioenergy Crops
- Pinch Technology

### Undergraduate Courses:

- Thermodynamics
- Engineering Mathematics
- Material and Energy Balance
- Unit operation
- Energy Management and Analysis in Food Machineries and Plants

## *Academic Interests*

- Drying Technology
- Energy and Exergy Analyses
- Food Engineering
- Food Plant Simulation and Modeling
- Renewable Energies

## *Computer Literacy*

–MATLAB: Neural Network Toolbox, Genetic algorithms, Curve fitting tool

–Optimization software

–SPSS

–TRNSYS (Renewable energy software)

–HOMER (Renewable energy software)

–Microsoft Office (Excel, Word, PowerPoint)