Curriculum vitae for Avraham Arbel

Date and place of birth: June 27, 1953; Israel

University Education:

1991 - 1998 Ph.D. in Engineering at the Department of Fluid Mechanics and Heat Transfer, Faculty of Engineering, Tel Aviv University

1986 - 1989 M.Sc. in Engineering at the Department of Fluid Mechanics and Heat Transfer, Faculty of Engineering, Tel Aviv University

1980 - 1984 B.Sc. in Engineering at the Department of Mechanical Engineering, Faculty of Engineering, Tel Aviv University

Positions Held and Academic Status:

2011 - 2020 Senior research scientist (rank A) at the A.R.O., Institute of Agricultural Engineering.

2009 - 2015 Head, Department of Growth, Production and Environmental Engineering at the ARO, Institute of Agricultural Engineering.

2003 - 2011 Senior research scientist (rank B) at the A.R.O., Institute of Agricultural Engineering.

1991 - 2003 Senior research scientist (rank C) at the A.R.O., Institute of Agricultural Engineering.

Award: Recipient of the ARO Scientist of the 2011 Year award

Selected Allowed Patents:

Arbel, A., Yekutieli, O., Kleinmann, I., Barak, M. and Beres, H. (2004). Multi-purpose structure. United States Patent Application Publication, Pub. No. US 2004/0049991 A1.

Arbel, A., Barak, M. and Shklyar, A. (2010). Combined heating and dehumidification (CHD) system for closed buildings, method and system for heating and dehumidifying. National Applications in: USA, Europe, Canada, China, India, Japan, South Africa, Eurasia, Mexico, Australia, Brazil, Korea, Ukraine, Israel.

Arbel, A., Barak, M., Zion, B. and Afgin, Y. (2020). Method and system for treating a product. National Applications in: USA and Europe. PCT/IL2015/051020; WO 2016/059633

Selected Publications:

Arbel, A. and Sokolov, M. (1991). Greenhouse heating with fresh water floating collector solar pond: a feasibility study. *J. Sol. Energy Eng.* 113: 66-72.

Arbel, A. and Sokolov, M. (1994). Improving load matching characteristics of a thermosyphonic solar system by thermostatically controlled circulation. *Sol. Energy* 52: 347-358.

Arbel, A., Yekutieli, O. and Barak, M. (1999). Performance of a fog system for cooling greenhouses. *J. Agric. Eng. Res.* 72: 129-136.

Arbel, A., Barak, M. and Shklyar, A. (2003). Combination of forced ventilation and fogging systems for cooling greenhouses. *Biosystems Eng.* 84: 45-55.

Arbel, A., Shklyar, A., Hershgal, D., Barak, M. and Sokolov, M. (2003). Ejector irreversibility characteristics. *J. Fluids Eng.* 125: 121-129.

Arbel, A. and Sokolov, M. (2004). Revisiting solar-powered ejector air conditioner-the greener the better. *Sol. Energy* 77: 57-66.

Arbel, A. and Shklyar, A. (2010). Simulation of incompressible flow with alternate pressure Dirichlel and Neumann conditions. Math. Comput. Simul. 81: 742-756.

Arbel, A. and Shklyar, A. (2011). Optimization of the iteration parameters of the simulation of incompressible flow. Math. Comput. Simul. 82: 104-117.

Zion, B., Gollop, R., Barak, M., Sela, S., & Arbel, A. (2021). External disinfection of shell eggs using steam in a Thermal Trap Food Control, 127. https://doi.org/10.1016/j.foodcont.2021.108135