

## Martin Okos Ph.D. Ohio State University - 1975

# Professor

Ag. & Biological Engineering Department Outstanding Counselor Award – 2001, 2003, 2005 Purdue University Agricultural Research Award – 1992 AICHE Fellow Award – 2008

#### **Research Areas:**

Food & Bioprocess Engineering. Heat & mass transfer in foods. Computer-aided process design. Continuous fermentors. Experimental & computer-aided research in optimization of food & bioprocesses.

### **Classes Taught:**

ABE 555 – Biological and Food Processing Unit Operations ABE 556 – Biological and Food Process Design

#### Selected Publications (last 5 years):

- Okos, M.R., G. Narsimhan, R.K. Singh, and A.C. Weitnauer. 2007. Chapter 10. Food Dehydration. in "Hdbk of Food Engrg, 2nd Ed." by Heldman/Lund (Cat. #DK2202). Published.
- Hailemariam, L., M. Okos and O. Campanella. A mathematical model for the isothermal growth of bubbles in wheat dough. Journal of Food Engineering. In press
- Leaelaf Hailemariam, Martin Okos and Osvaldo Campanella, 2007, A mathematical model for the isothermal growth of bubbles in wheat dough" Journal of Food Engineering Volume 82, Issue 4, October 2007, Pages 466-477
- Choi, Y. and M. R. Okos. 2006 Effects of temperature and composition on the thermal conductivity of foods. Encyclopedia of Agricultural and Food Engineering.
- Reid, J., O.H. Campanella, C.M. Corvalan and M.R. Okos 2006. Finite element analysis of the influence of power-law rheology on flow distributions in a coathanger manifold. Polymer Engineering and Science.
- Levine, L., O. H. Campanella, C. Corvalan, M. R. Okos, and D. Gonzalez. 2003. A model for predicting the aspect ratio of cereal flakes. Cereal Food World 48(6):289-295.
- Levine, L., O. H. Campanella, C. Corvalan, and M. R. Okos. 2004. A model for predicting forces and work inputs of cereal flaking. Cereal Food World 49(1)11-19.
- Levine, L., O. H. Campanella, M. R. Okos, and K. Ross. 2004. Research Note: Some observations about the physicochemical effects of flaking. Cereal Food World 49(2):65. April.
- Reid, J., Campanella, O.H., Corvalan, C.M. and Okos, M.R. 2003. The influence of power-rheology on flow distributions in coathanger manifold. Polymer Engineering and Science, 43(3):693-703.
- Levine, L., Campanella, O. H., Okos, M. R. and Ross, K.A. 2003. Some observations about the physicochemical effects of flaking. Cereal Food World, 49(2):65.

## Selected Conference Presentations (last 5 years):

- Hailemariam, L.M., M.R. Okos, and O.H. Campanella. 2006. A mathematical description of bubble growth in bread dough.
  Paper 339d, AIChE Annual Meeting, October 30 – November 4, San Francisco.
- Gonzalez, D.C., B. Mert, O.H. Campanella, and M.R. Okos. 2005. A novel non-invasive method to measure viscoelastic properties of cereal grains during processing. Paper 36D-32, IFT Annual Meeting, July 15-20, New Orleans, LA.
- Chen, G., Corvalan, C.M., Campanella, O.H., Mauer, L. and Okos, M.R. Modeling and Design of a Mini Food Extruder with High Viscous Heat Generation. 2005 AIChE Annual Meeting, Cincinnati, OH, 2005.
- Amornpongchai, A., Okos, M. R., Campanella, O. H. and Dale, N. Effects of glass transition temperature on granulation of pharmaceutical powder. Institute of Food Technologists Annual Meeting, Las Vegas, NV July, 2004.
- Leung, M. P., Mert. B., Okos, M. R., and Campanella, O. H. Rheological properties of soybean flour as a function of moisture, temperature and oil content. Institute of Food Technologists Annual Meeting, Las Vegas, NV, July 2004.
- Gonzalez, D., Campanella, O.H. and Okos, M.R. Characterizing the effect of endoxylanases on the rheology of extruded paste dough. Institute of Food Technologists Annual Meeting, Chicago, IL, July 2003.
- Rozzi, L.A., Campanella, O.H. and Okos, M.R. Dynamic rheological properties of what flour dough at elevated temperatures. Institute of Food Technologists Annual Meeting, Chicago, IL, July 2003.
- Campanella, O.H., Levine, L., Corvalan, C.M. and Okos, M.R. A model to predict the flaking of cereals. American Institute of Chemical Engineers, San Francisco, CA, November 2003.
- Rozzi, L.A., Willis, B.F., Okos, M.R. and Campanella, O.H. The transition of viscoelastic properties of sheeted bread doughs as affected by temperature and moisture. American Institute of Chemical Engineers, San Francisco, CA, November 2003.
- Leung, M.P., Okos, M.R. and Campanella, O.H. Rheology of soybeans extrudates within the glass transition temperature range. American Institute of Chemical Engineers, San Francisco, CA, November 2003.