Resume

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Martial status: Married, 2 children

Education:

1963 - B.Sc. (Chemical Engineering) Technion, Israel Institute of Technology

1967 - M.Sc. (Food Engineering and Biotechnology) Technion, Israel Institute of Technology.

1971 - D.Sc. (Food Engineering and Biotechnology) Technion, Israel Institute of Technology.

Professional and Academic Experience:

l990 to Present: Professor of Food Engineering,
Department of Food Science, University of Massachusetts.

l975 to l990: Professor, Associate and Assistant Professor of Food Engineering,
Department of Food Engineering, University of Massachusetts.

1987-1993: Graduate Program Director of the Food Engineering program.

l972 to l975: Head of the food technology laboratory at INVESTI, Caracas, Venezuela.

1964 to 1966 and l969 to l971: Member of several technical committees of the Israeli Institute of Standards.

Teaching Areas: Food processing and unit operations in food engineering, Physical properties of foods and biological materials.

Current Research Areas: Microbial populations dynamics, kinetics of biochemical reactions in foods, the mechanics of brittle foods, mechanical testing of food materials, Squeezing flow viscometry.

Consulting Areas: Food processing, industrial rheology, powder technology.

Editorial board membership:
Journal of Texture Studies (since 1982), Journal of Food Science (l985-l988, 1999-2002), Journal of Food Process Engineering (l987-l990). Food Science and Technology International (Since 1996), Journal of Food Properties (Since 1997), Food Engineering Series – Springer Publishing (Since 1998), Journal of Food Protection (2001-2009).

Current membership in Professional Societies:
Institute of Food Technologists (IFT), Sigma Xi (President of the UMass Chapter l987/8), The Society of Rheology.

Publication Referee (Partial list): Transactions of the American Society of Agricultural Engineers, Journal of Texture Studies, Journal of Food Science, Powder Technology, Journal of Food Process Engineering, Food Technology, Journal of Food Processing and Preservation, Biotechnology Progress, Journal of Rheology, Rheologica Acta, American Institute of Chemical Engineers Journal, Food Science and Technology (lwt), Journal of Food Engineering, Food Hydrocolloids, Critical Reviews Food Science. & Nutrition, Food Microbiology, Food Research International, Food Science and Technology International, Journal of Materials Science, International Journal of Food Microbiology, Journal of Food Protection, Journal of Applied Microbiology, Letters to Applied Microbiology, Chemical Engineering Science.

Research Proposals Referee (Partial list): National Science Foundation, Sea Grant, United States Department of Agriculture, Research Canada, International Science Foundation. The national research councils of Israel, Argentina and Chile.

Invited speaker to Special Conferences and Seminars: USA, France, Colombia, Mexico, Germany, The Netherlands, Switzerland, England, Israel, Venezuela, New Zealand, Argentina, Spain, Costa Rica, Canada, Ireland, Chile.

l989 & 1996: (Spring Semesters). Visiting Professor at the Technological University of Karlsruhe (Germany).

l986 & 1989: (Spring Semester and winter). Advisor to the University of Costa Rica on a Food Technology program.

l982 & 1996: (Fall Semester and winter) Visiting professor at the Technion, Israel Institute of Technology.

Honors:
G.W. Scott-Blair Memorial Award (Rheology) of the American Association of cereal Chemists.
Listed by ISI as highly cited researcher.
Member of the International Academy of Food Science and Technology.
Fellow of the World Innovation Foundation.

Web pages containing downloadable software:
[Accessible from http://www-unix.oit.umass.edu/~aew2000/]
Calculating the water activity of dry food mixtures with MS Excel®.
Estimating the probability of high microbial counts with MS Excel®.
Modeling microbial inactivation, survival and growth with MS Excel® (12 workbooks).
Using the 'Fermi Solution' in microbial risk assessment with MS Excel®.
Modeling isothermal and non-isothermal microbial growth using a generalized logistic (Verhulst) model with MS Excel® (4 workbooks).

List of publications:
* Peleg, M. 2006. Advanced quantitative microbiology for food and biosystems: Models for predicting growth and inactivation. CRC Press, Boca Raton FL.

* Corradini, M.G. and Peleg, M. 2006. Solid food foams. In: Aguillera, J.M. and Lillford, P. Properties of food cellular solids and food composites. Springer Verlag. New York. (in press).

* Peleg, M., Normand, M.D., Horowitz, J. and Corradini, M.G. 2006. An expanded Fermi solution for microbial risk assessment. International Journal of Food Microbiology (in press).

* Corradini, M.G. and Peleg, M. 2006. Shelf-life estimation from accelerated storage data. Trends in Food Science and Technology (in press).

* Corradini, M.G. and Peleg, M. 2006. Direction reversals in the mechanical signature of cellular snacks: A measure of brittleness? Journal of Texture Studies (in press).

* Corradini, M.G. and Peleg, M. 2006. Linear and non-linear kinetics in the synthesis and degradation of acrylamide in foods and model systems. Crit. Rev. Food Sci. Nutr. 46:489-517.

* Corradini, M.G. and Peleg, M. 2006. Prediction of vitamin loss during non-isothermal heat processes and storage with non-linear kinetic models. Trends in Food Science & Technology 17:24-34.

* Corradini, M.G., Normand, M.D. and Peleg, M. 2006. On expressing the equivalence of non-isothermal and isothermal heat sterilization processes. J. Sci. Food Agric. 86:785-792.

* Corradini, M.G. and Peleg, M. 2006. On modeling and simulating transitions between microbial growth and inactivation or vice versa. Intnl. J. Food Microbiol. 108:22-35.

* Peleg, M. 2006. On fundamental issues in texture evaluation and texturization. Food Hydrocolloids 20:405-414.

* Corradini, M.G., Amézquita, A., Normand M.D. and Peleg, M. 2006. Modeling and predicting non-isothermal microbial growth using general purpose software. Intnl. J. Food Microbiol 106:223-328.

* Corradini, M.G. and Peleg, M. 2006. The non-linear kinetics of microbial inactivation and growth. In: Brul, S., Zwietering, M. and van Grewen, S. (Eds.) Modelling microorganisms in food. Woodhead Publishing, Cambridge, UK. (In press).

* Corradini, M.G. and Peleg, M. 2005. Consistency of dispersed food systems and its evaluation by squeezing flow viscometry. J. Texture Studies 36: 605-629.

* Corradini, M.G., Normand, M.D. and Peleg, M. 2005. Calculating the efficacy of heat sterilization processes. J. Food Engr. 67:59-69.

* Barrett, A., Cardelo, A., Maguire, P. and Peleg, M. 2005. Moisture distribution and textural changes in stored model sandwiches. J. Texture Studies 36:569-589.

* Peleg, M., Normand, M.D. and Corradini, M.G. 2005. Generating microbial survival curves during thermal processing in real time. Journal of Applied Microbiology 98:406-417.

* Corradini, M.G. and Peleg, M. 2005. Estimating non-isothermal bacterial growth in foods from isothermal experimental data. Journal of Applied Microbiology 99:187-200.

* Peleg, M. 2005. Mixtures of food powders and particulates. In: Onwulata, C.I. (Ed.) Encapsulated and Powdered Foods. CRC Taylor & Francis, New York. pp.27-37.

* Corradini, M.G. and Peleg, M. 2004. Demonstration of the Weibull-Log logistic survival model's applicability to non isothermal inactivation of E. coli K12 MG1655. Journal of Food Protection 67:2617-2621.

* Periago, P.M., van Zuijlen, A., Fernandez, P.S., Klapwijk, P.M., ter Steeg, P.F., Corradini, M.G. and Peleg, M. 2004. Estimation of the non-isothermal inactivation patterns of Bacillus sporothermodurans IC4 spores in soups from their isothermal survival data. Intntl. J. of Food Micro. 95:205-218.

* Peleg, M., Corradini, M.G. and Normand, M.D. 2004 Kinetic models of complex biochemical reactions and biological processes. Chemie Ingenieur Technik 76:413-423.

* Corradini, M. G. and Peleg, M. 2004. A model of non-isothermal degradation of nutrients, pigments and enzymes. J. Science Food Agric. 84:217-226.

* Hadas, O., Corradini, M.G. and Peleg, M. 2004. Statistical analysis of the fluctuating counts of fecal bacteria in the water of lake Kinneret. Water Research 38:79-88.

* Peleg, M. 2004. Analysing the effectiveness of thermal preservation processes. In: Richardson, P. (Ed.): Improving thermal processing. Woodhead Publishing, Cambridge, UK. pp. 411-426. (See Peleg, 2003. Modelling applied to processes: the case of thermal preservaton - Reprinted with very minor changes upon the publisher's request.)

* Peleg, M. and Normand, M.D. 2004. Calculating microbial survival parameters and predicting survival curves from non-isothermal inactivation data. Crit. Rev. Food Sci. Nutr. 44:409-418.

* Corradini, M.G. and Peleg, M. 2003. A model of microbial survival curves in water treated with a volatile disinfectant. J. Appl. Microbiol. 95:1268-1276.

* Peleg, M. 2003. Modelling applied to processes: the case of thermal preservation. In: Zeuthen, P. and Bøgh-Sørensen, L. (Eds.): Food preservation techniques. Woodhead Publishing, Cambridge, UK. pp. 507-523.

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* Corradini, M.G. and Peleg, M. 2003. A theoretical note on the estimation of the number of recoverable spores from survival curves having an activation shoulder. Food Research Intnl. 36:107-1013.

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* Kampf, N., Gonzalez Martinez, C., Corradini, M.G. and Peleg, M. 2003. Effect of two gums on the development, rheological properties and stability of egg albumen foams. Rheologica Acta 42:259-268.

* Gonzalez Martinez, C., Corradini, M.G. and Peleg, M. 2003. Effect of moisture on the mechanical properties of pork rind ('chicharon'). Food Sci. Technol. Intnl. 9:249-255.

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* Peleg, M. 2003. The mechanical properties of brittle cellular and particulated foods. In: Proc. 3rd Int. Symp. Food Rheology & Structure. (Fischer, P., Martin, I. and Windhab, E.J., Eds.) pp. 75-81, ETH, Zurich.

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* Chanasattru, W., Corradini, M.G. and Peleg, M. 2002. Determination of practically significant differences in the sensorily perceived consistency of semi liquid foods. J. Texture Studies 33:445-460.

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* Peleg, M. and Cole, M.B. 1998. Reinterpretation of microbial survival curves. Crit. Rev. Food Sci. 38:353-380.

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* Suwonsichon, T. and Peleg, M. 1998. Instrumental and sensory detection of simultaneous brittleness loss and moisture toughening in three puffed cereal products. J. Texture Studies 29:255-274.

* Peleg, M. 1998. Mechanical properties of dry brittle cereal products. In: The properties of water in foods (ISOPOW 6). D. Reid, ed. Blackie A & P (Chapman and Hall), London. pp.231-252.

* Gerhards, C., Ulbricht, D. and Peleg, M. 1998. Mechanical characterization of individual instant coffee agglomerates. J. Food Sci. 63:140-142.

* Hoffner, B., Gerhards, C. and Peleg, M. 1997 Imperfect lubricated squeezing flow viscosimetry for foods. Rheol. Acta 36:686-693.

* Borges, A. and Peleg, M. 1997. Effect of water activity on the mechanical properties of selected legumes and nuts. J. Sci. Food Agric. 75:463-471.

* Campanella, O.H. and Peleg, M. 1997. On the Tan-delta - frequency relationship of foods and agricultural commodities. J. Texture Studies 28:585-592.

* Suwonsichon, T., Normand, M.D. and Peleg, M. 1997. Estimation of the mechanical properties of individual brittle particles from their bulk's compressibility. J. Texture Studies 28:673-686.

* DeRosier, B.L, Normand, M.D. and Peleg, M. 1997. Effect of lag on the symmetrized dot pattern (SDP) displays of the mechanical signatures of crunchy cereal foods. J. Sci. Food Agric. 75:463-471.

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