

SPYRIDON EMMANUEL PAPADAKIS
(Chemical Engineer, Ph.D.)



DATE OF BIRTH: 1/1/1957
PLACE OF BIRTH: Pyrgos Ilias, Greece
NATIONALITY: Greek
WORK ADDRESS: Department of Food Science and Technology,
University of West Attica,
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CURRENT POSITION:

Since March 2018

Professor, Department of Food Science and Technology, University of West Attica, Athens, Greece.

October 1993 to March 2018

Professor, Department of Food Technology, Technological Educational Institute of Athens, Greece.

EDUCATION:

1. Ph.D. in Chemical Engineering

Ph.D. in Chemical Engineering (September 1981 to January 1987),
University of California, Berkeley, USA.

Doctoral Dissertation: Air Temperatures and Humidities in Spray Drying.

Thesis Advisor: Professor C. Judson King.

Original Proposition: Modelling of Leaching Processes in Multi-Column Diffusion Batteries.

2. M.S. in Food Engineering

M.S. in Food Engineering (September 1979 to June 1981), University of California, Davis, USA.

Thesis Topic: Heat Transfer Model in a Vacuum Home Canning Unit -- Constant Heat Flux.

Thesis Advisor: Professor R. Larry Merson.

3. M.S. in Food Science

M.S. in Food Science (September 1979 to June 1981), University of California, Davis, USA.

Thesis Topic: Heat Transfer Model in a Vacuum Home Canning Unit -- Constant Temperature of Heating Source.

Thesis Advisor: Professor R. Larry Merson.

4. B.S. in Chemical Engineering

B.S. in Chemical Engineering (September 1974 to June 1979),

National Technical University of Athens, Greece.

Thesis Topic: Production of Leaf Protein Concentrates.

Thesis Advisor: Professor George Valkanas.

INDUSTRIAL EXPERIENCE:

October 1988 to July 1990

Production Manager, BIAMYL Starch and Glucose Industry S.A., Thessaloniki, Greece.

Responsible for the 70 people of Production Department. Main duties included: Following up daily production and dealing with technical problems. Production planning on a yearly, monthly and daily basis. Reporting to the Plant Manager on all production matters. Co-operation with Plant Manager and Engineering Manager for the optimisation of the various production processes. Co-operation with the Process Engineering Department of AMYLUM N.V. for the solution of technical problems. Visits to AMYLUM N.V., Aalst, Belgium to study production processes and organisation.

RESEARCH EXPERIENCE:

November 1990 to September 1992

Senior Research Scientist with the Drying and Particle Technology Section of the Separation Processes Service (SPS), U.K.A.E.A. (United Kingdom Atomic Energy Authority) Technology, Harwell Laboratory, Oxfordshire, U.K.

Research areas:

1. Product Quality and Drying.
2. Atomisation Mechanisms in Spray Drying.
3. Cascading Rotary Dryers.
4. Consultancy work for industry on various aspects of drying.
5. Development of spreadsheets for preliminary design calculations of dryers.
6. Water Activity of Solids.

October 1992 to October 1993

Outside collaborator for SPS, Harwell Laboratory, U.K.

Writing of Drying Manuals and software development.

March 2000 to September 2000

Visiting Scholar, Department of Food Science, Rutgers University, New Jersey, USA, being on sabbatical leave from T.E.I. of Athens. Collaboration with Professor Kit L. Yam in research projects and teaching.

Research areas:

1. Antimicrobial Food Packaging.
2. Active Microwave Packaging.
3. Effects of combined convection/microwave heating on food quality.
4. Shelf Life of Packaged Foods.
5. Modified Atmosphere Packaging of Fresh Produce.
6. Preparation of research proposals for the IMWO (Intelligent MicroWave Oven) project.

Teaching:

1. Collaboration in the teaching of the graduate course "Food Packaging Technology II".
2. Collaboration in upgrading the equipment and the lab exercises for the Food Engineering Laboratory.

ACADEMIC EXPERIENCE:

1981 - 1983

Teaching Assistant, Department of Chemical Engineering, University of California, Berkeley, USA (Courses: Unit Operations Laboratory, Chemical Kinetics, Process Design).

Academic Year 1992 - 93

Professor (part time) in the College of Engineering, T.E.I. of Patras, Greece. Teaching of the course: Electrochemistry.

Since October 1993

PROGRAMME OF UNDERGRADUATE STUDIES

Teaching of undergraduate courses: "Food Packaging" (theory and lab), "Food Processing II" (theory and lab), "Special Topics on Food Packaging" (theory), "Packaging of Wines and Beverages" (theory), "Food Engineering II" (theory and lab).

Thesis advisor of undergraduate students.

PROGRAMME OF GRADUATE STUDIES

Lectures to the graduate students of five MSc programmes on aspects of Food Processing and Food and Beverage Packaging for 16 academic years.

Thesis advisor of graduate students.

Member of doctoral theses examination committees and advisory committees.

Supervisor of doctoral research of one PhD student.

PUBLICATIONS:

a. Textbooks

1. Papadakis, S.E., (2010). *Food Packaging* (in Greek), Tziolas Publishing, Thessaloniki, 510 p.
2. Papadakis, S.E., (2018). *Food Packaging* (in Greek), 2nd edition, Tziolas Publishing, Thessaloniki, 738 p.
3. Damodaran, S. and Parkin, K.L., (2023). *Fennema Food Chemistry* (in Greek), translation in Greek of *Fennema's Food Chemistry*, 5th edition, S.E. Papadakis, N.G. Stoforos and K. Tzia

editors of the Greek edition, Parisianou Scientific Publications S.A., Metamorfofi, Attica.

b. Journals

1. Papadakis, S.E. and King, C.J., (1988). "Air Temperature and Humidity Profiles in Spray Drying. 1. Features Predicted by the PSI-Cell Model", *Ind. Eng. Chem. Res.*, **27**, 11, 2111-2116.
2. Papadakis, S.E. and King, C.J., (1988). "Air Temperature and Humidity Profiles in Spray Drying. 2. Experimental Measurements", *Ind. Eng. Chem. Res.*, **27**, 11, 2116-2123.
3. Papadakis, S.E. and Bahu, R.E., (1992). "The Sticky Issues of Drying", *Drying Technology*, **10**, 4, 817-837.
4. Papadakis, S.E., Bahu, R.E., McKenzie, K.A., and Kemp, I.C., (1993). "Correlations for the Equilibrium Moisture Content of Solids", *Drying Technology*, **11**, 3, 543-553.
5. Papadakis, S.E., Langrish, T.A.G., Kemp, I.C., and Bahu, R.E., (1994). "Scale-up of Cascading Rotary Dryers", *Drying Technology*, **12**, 1&2, 259-277.
6. Papadakis, S.E., Abdul-Malek, S., Kamdem, R.E., and Yam, K.L., (2000). "A Versatile and Inexpensive Technique for Measuring Color of Foods", *Food Technology*, 54, 12, 48-51.
7. Chung, D., Papadakis, S.E., and Yam, K.L., (2001). "Release of propyl paraben from a polymer coating into water and food simulating solvents for antimicrobial packaging applications", *Journal of Food Processing and Preservation*, **25**, 1, 71-87.
8. Langrish, T.A.G., Papadakis, S.E., and Baker, C.G.J., (2002). "Residence Times of Two- and Three-Component Mixtures in Cascading Rotary Dryers", *Drying Technology*, **20**, 2, 325-350.
9. Chung, D., Papadakis, S.E., and Yam, K.L., (2002). "Simple models for assessing migration from food-packaging films", *Food Additives and Contaminants*, **19**, 6, 611-617.
10. Chung, D., Papadakis, S.E., and Yam, K.L., (2003). "Evaluation of a polymer coating containing triclosan as the antimicrobial layer for packaging materials", *International Journal of Food Science and Technology*, **38**, 2, 165-169.
11. Chung D.H., Papadakis, S.E., and Yam K.L., (2003). "Simple Models for Evaluating Effects of Small Leaks on the Gas Barrier Properties of Food Packages," *Packaging Technology and Science*, **16**, 2, 77-86.
12. Yam, K.L. and Papadakis S.E., (2004). "A Simple Digital Imaging Method for Measuring and Analyzing Color of Food Surfaces," *Journal of Food Engineering*, **61**, 1, 137-142.
13. Papadakis, S.E., Gardeli, C. and Tzia, C., (2006). "Spray Drying of Raisin Juice Concentrate", *Drying Technology*, **24**, 2, 173-180.
14. Sabanis, D., Tzia, C. and Papadakis, S., (2007). "Effect of Different Raisin Juice Preparations on Selected Properties of Gluten-Free Bread", *Food Bioprocess Technol.*, DOI 10.1007/s11947-007-0027-9.
15. Mourtzinou, I., Kalogeropoulos, N., Papadakis, S.E., Konstantinou, K. and Karathanos, V.T., (2008). "Encapsulation of Nutraceutical Monoterpenes in β -Cyclodextrin and Modified Starch", *Journal of Food Science*, **73**, 1, S89-S94.
16. Konteles, S. J., Strati, I. F., Giannakourou, M., Batrinou, A., Papadakis, S., Ourailoglou, D., & Sinanoglou, V. J. (2022). Instant Herbal Powder: Functionality Assessment through Chemical, Microbiological and Shelf Life Kinetics. *Analytical Letters*, 55(9), 1505-1516.

Citations for the above publications (as of today): 1508

(retrieved from www.scopus.com and excluding self-citations of all authors)

c. Book Chapters

1. Chung D.H., Papadakis, S.E. and Yam K.L., (2006). "Thermal Processing of Packaged Foods," in *Handbook of Food Science, Technology, and Engineering*, Vol. III, chapter 134, Y.H. Hui (ed.), CRC Press, Boca Raton, FL.
2. Papadakis, S.E., (2015). "Food Packaging and Aseptic Packaging" in *Handbook of Food Processing: Food Preservation*, Vol. 1, chapter 17, pp. 571-650, T. Varzakas and C. Tzia (eds.), CRC Press, Boca Raton, FL.

d. Proceedings of International Symposia

1. Papadakis, S.E. and King, C.J., (1988). "Factors Governing Temperature and Humidity Fields in Spray drying". Presented at the Sixth International Drying Symposium, IDS'88, Versailles, France, September 5-8, 1988. Published in the Proceedings of IDS'88 and in *Drying '89*, pp. 347-354.
2. Papadakis, S.E., Langrish, T.A.G., Kemp, I.C., and Bahu, R.E., (1992). "A Short-Cut Design Method for Cascading Rotary Dryers". Presented at the Eighth International Drying Symposium,

- IDS'92, Montreal, Canada, August 2-5, 1992. Published in *Drying '92*, pp. 1258-1267, A.S. Mujumdar (ed.), Elsevier, Amsterdam.
3. Papadakis, S.E., Bahu, R.E., McKenzie, K.A., and Kemp, I.C., (1993). "Measurement and Prediction of the Equilibrium Moisture Content for Drying". Presented at The 1993 IChemE Research Event, University of Birmingham, U.K., January 6-7, 1993. Published in the Proceedings of The 1993 IChemE Research Event, pp. 507-509.
 4. Papadakis, S.E., Gardeli, C.I., and Tzia, C., (1998). "Raisin Extract Powder: Production, Physical and Sensory Properties". Presented at the 11th International Drying Symposium, IDS'98, Halkidiki, Greece, August 19-22, 1998. Published in *Drying '98*, vol B, pp. 1207-1213, C. B. Akritidis, D. Marinos-Kouris and G.D. Saravakos (eds.), Ziti Editions, Thessaloniki, Greece.
 5. Gardeli, C.I., Filipopoulos, C., Liadakis, G.N., Tzia, C., and Papadakis, S.E., (1998). "Use of Freeze and Spray Drying in the Production of Protein Isolates from Tomato Processing Wastes". Presented at the 11th International Drying Symposium, IDS'98, Halkidiki, Greece, August 19-22, 1998. Published in *Drying '98*, vol B, pp. 1027-1034, C. B. Akritidis, D. Marinos-Kouris and G.D. Saravakos (eds.), Ziti Editions, Thessaloniki, Greece.
 6. Paramera, E.I., Konteles, S.J., Papadakis, S.E. and Karathanos, V.T. (2011). "Microencapsulation of curcumin in cells of *Saccharomyces cerevisiae*". Presented at the 11th International Congress on Engineering and Food (ICEF11), May 22-26, 2011, Athens, Greece. Published in ICEF11 Congress Proceedings, Volume I, pp. 583-584.
 7. Mourtzinou, J., Papadakis, S.E., Igoumenidis, P. and Karathanos, V.T. (2011). "Encapsulation of Melissa Officinalis leaf's active compounds in β -cyclodextrin and modified starch". Presented at the 11th International Congress on Engineering and Food (ICEF11), May 22-26, 2011, Athens, Greece. Published in ICEF11 Congress Proceedings, Volume III, pp. 2175-2176.
 8. Sinanoglou, V.J., Zoumpoulakis, P., Strati, I.F., Proestos, C., Papadakis, S.E. and Sflomos, K. (2013). Lipid Profile Examination of Gamma Irradiated Macadamia Nuts in Relation to Packaging and Storage Conditions". Presented at EUROFOODCHEM XVII, May 7-10, 2013, Istanbul, Turkey.
 9. E.K. Nikolidaki, A. Lazou, G.S. Skoumpi, S.E. Papadakis, V.T. Karathanos and N. P. Zogzas, Quality Degradation Effects during Storage of Currant-Paste, International Conference 'Science in Technology' SCinTE 2015, November 2015, Athens, Greece.
 10. Lazou, E. Nikolidaki, V. Karathanos, S. Papadakis and N. Zogzas, Effect of storage temperature and relative humidity on glass transition of black Corinthian currant paste, 29th EFFoST International Conference, November 2015, Athens, Greece.
 11. E.K. Nikolidaki, G.S. Skoumpi, S.E. Papadakis, N.P. Zogzas, Factors affecting shelf life and quality attributes of currant-paste, ISFRS 2015-7th International Symposium on Food Rheology and Structure, 7-11 June 2015, Zurich, Switzerland, Book of Abstracts: 245.
 12. E.K. Nikolidaki, G.S. Skoumpi, I.Mandala, V.T. Karathanos, S.E. Papadakis, N. P. Zogzas, Mechanical, rheological and organoleptic properties changes during storage of currant-paste, ICEF12-12th International Congress on Engineering and Food, 14-18 June 2015, Quebec, Canada.

e. Reports - Commercial in Confidence

1. Papadakis, S.E., Kemp, I.C., and Bahu, R.E., (1991). "Review of Sewage Sludge Drying", SPS/Dryer Advisory Service/Report 1/91, 40 pages.
2. Papadakis, S.E., (1991). "Measurement of Stickiness and Equilibrium Moisture Contents", SPS/Dryer Advisory Service/Report 4/91, 11 pages.
3. Papadakis, S.E., Kemp, I.C., McKenzie, K.A., and Bahu, R.E., (1992). "A Study of the Expansion of Tobacco in Drying/Heating with Steam", SPS/Dryer Advisory Service/Report 1/92, 35 pages.
4. Papadakis, S.E. and Kemp, I.C., (1992). "User Guides for the SPS Spreadsheets: ROTDRY, ROTBAS, HABLCON, BURNER, PNEUCONV", SPS Report, 25 pages.
5. Langrish, T.A.G., Papadakis, S.E. and Baker, C.G.J., (1992). "Residence Times of Two and Three Component Mixtures in Cascading Rotary Dryers", SPS Research Report 25, 73 pages.
6. Papadakis, S.E., (1993). "Powder Stickiness", in SPS Solids Drying Manual, Volume X: Product Quality and Solids Properties, Part 2, 65 pages.
7. Papadakis, S.E., Baker, C.G.J. and Langrish, T.A.G., (1994). "Design Guide", in SPS Solids Drying Manual, Volume IV: Rotary Drying, Part 4, 113 pages.
8. Papadakis, S.E., (1995). "Product Quality", in SPS Solids Drying Manual, Volume I: Introduction to Drying Technology, Part 3, Section 8, 16 pages.

SCIENTIFIC / RESEARCH ACTIVITIES:

Local Course Leader of the Graduate Programme of the Department of Food Technology, T.E.I. of Athens, for the academic year 1994 - 95.

Visit (April 11 to 17, 1999) to Gent, Belgium through the E.C. Socrates/Erasmus program (Teaching Staff Mobility) and teaching in the intensive course "New Technologies in Food Packaging and Food Preservation", organized by the Department of Food Technology and Nutrition of the University of Gent.

Project manager and main researcher for the two-year (1999-2001) T.E.I. of Athens research project titled: "Raisin extract powder: production, properties, applications".

President of several committees for academic and financial matters in the Department of Food Technology, T.E.I. of Athens.

Member (1999-2001) of the Special Scientific Committee on Food Technology of the Chemical Engineering Division of the Technical Chamber of Greece.

Reviewer for the journals: Journal of Food Engineering, Journal of Food Science.

Member of the National Scientific Committee, 11th International Congress on Engineering and Food (ICEF11), May 22-26, 2011, Athens, Greece.

HONORS:

1983 - 1987 University of California, Berkeley, Chemical Engineering Department Research Assistantship.

1980 - 1981 University of California, Davis, Graduate Division Scholarship.

1968 - 1974 Award of Excellence (six times, High School), Greek Department of Education.

1974 Award of Excellence, City of Athens, Greece.

LANGUAGES: ENGLISH, FRENCH, ITALIAN

MISCELLANEOUS:

Member of Technical Chamber of Greece.

Member of Greek Association of Chemical Engineers.

Professional member of the Institute of Food Technologists (USA)