



GUSTAVO V. BARBOSA-CÁNOVAS

CURRICULUM VITAE

February 2009

2/26/2009

(Office) Department of Biological Systems Engineering
Washington State University
PO Box 646120
Pullman, WA 99164-6120
USA

(Home) 1260 SE Earthtone Court
Pullman, WA 99163
USA

(Mailing Address) PO Box 158
Pullman, WA 99163
USA

Telephone: (Business) (509) 335-6188
(Home) (509) 332-4352
(Cell) (509) 338-5703

Fax: (509) 335-2722

E-mail: barbosa@wsu.edu

Websites: <http://www.bsyse.wsu.edu/barbosa/>
<http://bsyse.wsu.edu/~barbosa/cnrf/index.htm>

Birthplace: Minas, Uruguay

EDUCATION

Ph.D., Food Engineering, University of Massachusetts, Amherst, 1985.

M.S., Food Engineering University of Massachusetts, Amherst, 1982.

B.S., Mechanical and Industrial Engineering, University of Uruguay, Montevideo, Uruguay, 1977

HONORS AND AWARDS

Fellow of the British Institute of Food Science and Technology, 2006

AIChE Outstanding Volunteer service award. 2006

IFT Division Outstanding Volunteer. Name placed in Hall of Honor, IFT Annual Meeting and Food Expo, July 2005. New Orleans, LA.

IFT Nicolas Appert Award, Institute of Food Technologists, 2005—Highest Award in Food Science and Technology granted by any institution around the world.

Fellow of the Institute of Food Technologists, The Society for Food Science and Technology, 2003

Elected permanent member of the International Academy of Food Science and Technology (IAFoST), 2003 (award received in Chicago, IL)

Elected to Governing Council of IUFoST (International Union for Food Science and Technology) for the term 2003-2006

Sir Frederick McMaster Fellowship for Excellence in Scientific Research. Government of Australia, 2002.

Member, National Academy of Engineering (Uruguay), Montevideo, Uruguay, 2001.

Nominated for Member, International Academy of Food Science and Technology, IUFoST, 2001.

John Christian Fellowship to deliver a series of lectures in Food Process Engineering at Food Science Australia-CSIRO, Sydney and Melbourne, Australia, 2001.

International Award, Institute of Food Technologists, Chicago, IL, 2001.

Cited in Lexington's Who's Who, 1999-2000 Millennium Edition.

Faculty Excellence in Research Award, College of Agriculture and Home Economics, Washington State University, 1999.

Institute of Food Technologists Scientific Lecturer, Chicago, IL. 1998-2001.

Institute of Food Technologists Scientific Communicator, Chicago, IL. 1998 – present.

Cited in International Who's Who of Professionals, 1998.

Sahlin Faculty Award for Excellence in Research, Scholarship and Arts Finalist, Washington State University, 2000, 2001 and 2002.

Sahlin Faculty Award for Excellence in Research, Scholarship and Arts Nomination, Washington State University, 1998, 1999, 2000 and 2001.

Researcher of the Year, College of Engineering and Architecture, Washington State University, 1997.

Generalitat de Valencia Fellowship to conduct research for three months at IATA (Instituto de Agroquímica y Tecnología de Alimentos), Valencia, Spain, 1997.

Research Excellence in Biological Systems Engineering, College of Engineering and Architecture, Washington State University, 1996 and 1997.

Featured Researcher. College of Agriculture and Home Economics, Washington State University, 1996-1998.

ESCOP/ASOP Fellowship to receive training in administration leadership, College of Agriculture and Home Economics, 1996 (did not attend).

Transactions of the ASAE Paper Award, 1995.

Cited in American Men & Women in Science, 1994.

Distinguished International Professor. Government of Catalonia, Spain, 1994.

University of Lleida Fellowship to conduct research for two months at this Institution, Lleida, Spain, 1994.

Honorary Professor. University of Uruguay, Uruguay, 1993 – present.

Kharkov Exchange Faculty Advisor. College of Agriculture and Home Economics, Washington State University (not accepted due to academic schedule conflicts), 1992 and 1993.

Outstanding Teaching Faculty in Agricultural Engineering. College of Engineering and Architecture, Washington State University, 1992.

R. M. Wade Award for Excellence in Teaching Nomination, College of Agriculture and Home Economics, Washington State University, 1992.

Featured Teacher, College of Agriculture and Home Economics, Washington State University, 1992.

Cited in Who's Who Among Hispanic Americans, 1992.

Dedication Ceremony. AIChE-Student Chapter, Mayagüez, PR, 1990.

NSF-EPSCoR Scholarly Productivity Award for Excellence in Research, NSF-EPSCoR Program, Mayagüez, PR, 1988 and 1989.

University of Massachusetts Fellowship for Ph.D. studies in Food Engineering, 1982-1985.

Fulbright Scholarship for Master of Science studies in Food Engineering at University of Massachusetts, Amherst, 1980-1982.

Government of Israel Scholarship, Ministry for Foreign Affairs: International Postgraduate Course in Computer Applications to Water Resources; Technion, Israel Institute of Technology, Haifa, Israel, 1980.

Youth for Understanding Scholarship to study seven months at a US High School, 1967 (not accepted due to academic schedule conflicts).

MEMBERSHIP IN SCIENTIFIC AND HONORARY SOCIETIES

Sigma Xi	The Scientific Research Society, USA
ASME	American Society of Mechanical Engineers
IFT	Institute of Food Technologists, USA
AIChE	American Institute of Chemical Engineers
ASAE	American Society of Agricultural Engineers
ASEE	American Society for Engineering Education
FPEI	Food Process Engineering Institute, USA
AUI	Uruguayan Society of Engineers
AFS	American Filtration and Separations Society
CRS	Controlled Release Society, USA
ACTA-PR	Puerto Rican Association for Food Science and Technology
Gamma Sigma Delta	The Honor Society of Agriculture, USA
Phi Tau Sigma	The Honor Society for Food Science, USA
FASR-WSU	Faculty Association for Scholarship and Research, Washington State University, USA

PROFESSIONAL RECORD**I) ACADEMIA**

- 1998-present Professor of Food Engineering
Biological Systems Engineering
Washington State University
Pullman, WA
- 1994-1998 Associate Professor of Food Engineering
Biological Systems Engineering
Washington State University
Pullman, WA
- 1990-1994 Assistant Professor of Food Engineering
Biological Systems Engineering
Washington State University
Pullman, WA

Research Interests

Food Preservation by Nonthermal Methods
Physical Properties of Foods
Food Process Engineering
Powder Technology
Minimally Processed Foods
Solid-Liquid Separation
Controlled Release

Teaching

BSysE 588	Food Powders (Spring 2009)
BSysE 483	Food Separation Processes Design (Fall 2008)
BSysE 583	Food Separation Processes Design (Fall 2008)
BSysE 4/586	Food Rheology (Spring 1995, 1997, 1999, Fall 2001)
BSysE 598	Graduate Seminar (Spring 1992, Fall 1998, Spring 2002)
BSysE 4/582	Food Process Engineering (Spring 1991-1997, 1999-2004)
BSysE 4/583	Food Separation (Fall 1994, 1996, 1998, 2000, 2002, 2004)

BSysE 551	Advanced Food Engineering (Spring 2002)
FSHN 433	Agricultural Processing (Spring 1992)
BSysE 4/588	Food Powder Technology (Spring 1991, 1997, 1999, 2000, Fall 1993)
BSysE 386	Physical Properties of Agricultural Materials (Spring 1991)

Visiting Faculty at WSU to Develop Joint Research Projects

Carmen González, Universidad de Barcelona, Spain (CIRIT Scholar)
 Mano Pérez-Won, Universidad de la Serena, Chile
 Arantxa Aznar-Samper, Polytechnic University of Cartagena, Spain (UPC Scholar)
 Fernando Fernández-Martín, Instituto del Frío, CSIC, Spain (NATO Scholar)
 Servé Notermans, TNO, The Netherlands (Dutch Government Project)
 Jorge Vélez-Ruiz, Universidad de las Américas (UDLAP), Puebla, México
 Javier Borderías, Instituto del Frío, CSIC, Spain
 Margarita Tejada, Instituto del Frío, CSIC, Spain
 Cristina Alvarez, Instituto del Frío, CSIC, Spain
 Olga Martín-Belloso, University of Lleida, Spain (NATO Scholar)
 Marisa Guerra, Simón Bolívar University, Venezuela
 Elba Sangronis, Simón Bolívar University, Venezuela
 Albert Ibarz, University of Lleida, Spain (CYCIT Scholar and CIRIT Scholar)
 Enrique Ortega, México (Fulbright Scholar)
 Juan Fernández, Venezuela (USDA Scholar)
 Javier Arántegui, University of Lleida, Spain (CIRIT Scholar)
 Lidia Dorantes, Instituto Politécnico Nacional, México (CYTED Scholar)
 Patricia Martínez, Universidad Autónoma México (CONACYT Scholar)
 Santiago Esplugas, Universidad de Barcelona, Spain (CIRIT Scholar)
 Carmen González, Universidad de Barcelona, Spain (CIRIT Scholar)
 Rafael Pagán, Universidad de Zaragoza, Spain (CICYT Scholar)
 Javier Raso Pueyo, Universidad de Zaragoza, Spain (CICYT Scholar)
 Juan Rodríguez, UNELLEZ, San Carlos, Venezuela
 Beatriz Tovar, Instituto Tecnológico de Tepic, México (CONACYT Scholar)
 Aurelio López-Malo, UDLAP, México (European Union Project STD-3)

Post-Doctoral Fellows Supervised and Supported

Daniela Bermudez	2008-
David Sepúlveda	2003-2004
Biansheng Lee	2002-2004
Marcela Góngora-Nieto	2001-2002
Kulbir Pannu	1999-2000
Li Ma	1996-1997
Yaguang Luo	1993-1995
Marian Simpson	1994-1995
Bay-Lin In	1993-1995
Victoriana Allen	1993-1994
Qinghai Zhang	1992-1994
Adel Mondale-González	1991-1993

Chair of Graduate Committee

Ph.D program

Özlem Istanbulu, Ph.D in Engineering Science
 Daniela Bermudez, Ph.D in Engineering Science (May, 2008)
 Subba Rao Gurram, Ph.D in Engineering Science (December, 2007)
 Bilge Altunaker, Ph.D in Engineering Science (December, 2007)
 Mara Estrada, Ph.D in Engineering Science (November, 2004)
 José Angel Guerrero-Beltran, Ph.D in Engineering Science (November, 2004)
 Pablo Juliano, Ph.D in Engineering Science (May, 2006)
 Guadalupe Olivas, Ph.D in Engineering Science (November, 2004)
 José J. Rodríguez, Ph.D in Engineering Science (August, 2003)
 David Sepúlveda, Ph.D in Engineering Science (August, 2003)
 Gipsy Tabilo, Ph.D in Engineering Science (December, 2002)
 Federico Harte, Ph.D in Engineering Science (December, 2002)
 María Fernanda San Martín, Ph.D in Engineering Science (December, 2002)
 Juan Fernández, Ph.D in Engineering Science (December, 2000)
 M. Marcela Góngora-Nieto, Ph.D in Engineering Science (December, 2000)
 Hong Yan, Ph.D in Engineering Science (December, 2000)
 Enrique Palou, Ph.D in Engineering Science (May 1998)
 Jorge Vélez-Ruiz, Ph.D in Engineering Science (December 1996)
 Humberto Vega-Mercado, Ph.D in Engineering Science (May 1996)
 Li Ma, Ph.D in Engineering Science (May 1996)
 Usha R. Pothakamury, Ph.D in Engineering Science (August 1995)

M.S. program

Esteban Mejia-Meza, M.S. in Engineering Science

Maria Luisa Calderón, M.S. in Engineering (December 1998)
 Jatuphong Varith, M.S. in Engineering (May 1998)
 Nicolás Brancoli, M.S. in Engineering (December 1996)
 Subo Chang, M.S. in Engineering (December 1996)
 Emily Ren, M.S. in Engineering (December 1996)
 Hong Yan, M.S. in Engineering (December 1996)
 Blas J. Barletta, M.S. in Engineering (May 1993)
 Humberto Vega-Mercado, M.S. in Chemical Engineering (December 1988)

Member of Graduate Committee

Anchalee Sirichote, Ph.D. in Food Science (May, 2001)
 Luis Cuebas, M.S. in Chemical Engineering (May, 2000)
 Malathi Jandhyala, M.S. in Food Science (May, 2000)
 Elba Sangronis, Ph.D. in Food Science (May, 1999)
 Li Liang, M.S. in Food Science (May 1998)
 Woo-Suk Bang, M.S. in Food Science (May 1998)
 Russel Bruhn, Ph.D. in Electrical Engineering (December 1997)
 Jiali Zhou, M.S. in Food Science (May 1997)
 Steve Harrison, Ph.D. in Food Science (December 1996)
 Yujia Weng, M.S. in Food Science (December 1995)
 José A. Guerrero, M.S. in Food Engineering (May 1995)
 Armando Castro, Ph.D. in Food Science (December 1994)
 Ndi Embola, Ph.D. in Food Science (December 1994)
 Weihua Zhang, Ph.D. in Engineering Science (December 1994)
 René Balandrán-Quintana, M.S. in Food Science (November 1994)
 Don Spencer, M.S. in Electrical Engineering (May 1994)
 Ndi Embola, M.S. in Food Science (May 1992)
 Renu Mathew, M.S. in Engineering (May 1992)
 Edgardo Avilés, M.S. in Chemical Engineering (May 1989)

External Examiner

Sarmistha Basak, Ph.D. Thesis, Department of Food Science & Agricultural
 Chemistry, Mc Gill University, Canada (2001)
 Abdul Ghani, Ph.D. Thesis, Department of Chemical and Materials Engineering,
 The University of Auckland, New Zealand (2001)
 Hugh O'Donnell, Ph.D. Thesis, Department of Agricultural and Food
 Engineering, National University of Ireland (2000)
 Michelle Marcotte, Ph.D. Thesis, Department of Food Science & Agricultural
 Chemistry, McGill University, Canada (1999)
 Jordi Pagán, Ph.D. Thesis, Department of Agricultural Engineering, University of
 Lleida, Spain (1997)

Daniella Salvatori, Ph.D. Thesis, Department of Food Science and Technology,
Polytechnic University of Valencia, Spain (1997)

Other Academic Activities

- | | |
|--------------|--|
| 2002 | Consultant:
IRTA (Catalonian Research Institute in Food and Postharvest
Technologies)
Girona, Spain |
| 2000-2001 | Consultant:
Catholic University
Montevideo, Uruguay |
| 1998-2000 | Consultant:
College of Agronomy
University of Uruguay
Montevideo, Uruguay |
| 1998-2000 | Professor:
Master's Program in Food Technology
Valencia Polytechnic University/Catholic University
Montevideo, Uruguay |
| 1998-2001 | Chair:
Advisory Board
Universidad de La Sabana
Bogotá, Colombia |
| 1996-2000 | Visiting Professor:
Food Science and Technology Department
Instituto Tecnológico de Durango
Durango, México |
| 1994-1997 | Adjunct Associate Professor:
Food Science and Human Nutrition Department
Washington State University
Pullman, WA 99164-6376 |
| 1994-present | International Consultant:
Food and Agricultural Organization of the United Nations (FAO)
Viale delle Terme di Caracalla
00100 Rome, Italy |

- 1994-present Research Associate:
Area: Chemistry
Basic Sciences Development Program (PEDECIBA)
United Nations
- 1994-present Visiting Professor:
Food Science and Technology Department
University of Lleida
Lleida, Spain
- 1993-2004 Visiting Professor:
Food Science and Technology Department
University of Chihuahua
Chihuahua, México
- 1992-present Research Associate:
Area: Biology
PEDECIBA
United Nations
- 1991-2004 Visiting Professor:
Food and Chemical Engineering Department
University of Las Américas
Puebla, México
- 1985-1990 Assistant Professor:
Chemical Engineering Department
School of Engineering
University of Puerto Rico
Mayagüez, PR
- Research Interests:
Physical Properties of Foods
Food Process Engineering
Solid-Liquid Separation
Powder Technology
Controlled Release
- Teaching:
ME 4012 Analysis of Machine Elements
ME 4025 Mechanical Engineering Design
ChE 4077 Unit Operations in Food Engineering
ChE 5016 Plant Design for Chemical Engineering
ChE 5021 Chemical Engineering Design I

ChE 5022 Chemical Engineering Design II
 ChE 5036 Particulate Systems
 ChE 5995 Special Problems

1980-1985 Research Assistant:
 Food Engineering Department
 University of Massachusetts
 Amherst, MA

1978-1980 Assistant Professor:
 Mechanical Engineering Department
 School of Engineering
 University of Uruguay
 Montevideo, Uruguay

Teaching:
 Pneumatic and Hydraulic Control
 Machines III (pumps, boilers, compressors, internal combustion
 engines, turbines)

1974-1977 Instructor:
 School of Engineering
 University of Uruguay
 Montevideo, Uruguay

Teaching:
 Thermodynamics
 Kinematics and Mechanisms

1971-1978 High School Physics Lab Assistant:
 Instituto Batlle y Ordoñez and Instituto Zorrilla, Montevideo,
 Uruguay. Responsible for: Physics Courses and Physics Lab
 Instrumentation

II) **INDUSTRIAL**

2001 Consultant: Key Technology, Inc., Walla Walla, WA

1998 Consultant: Nestlé Research & Development Center, Marysville, OH

1995 Consultant: Coffee Division, Procter & Gamble, Cincinnati, OH

- 1990 Consultant: Technical Division, Campbell Soup, Casera Foods Division, Barceloneta, PR
- 1989-1990 Consultant: Technical Division, Caribik-Sun, Tropical Fruit Juices Manufacturer, Mayagüez, PR
- 1989 Consultant: Production Division H. J. Heinz, Alimentos Heinz de Venezuela, Valencia
- 1987-1990 Consultant: Technical Division, Lotus, Pineapple Juice Manufacturer, Barceloneta, PR
- 1987-1988 Consultant: Cervecería India (Brewery), Mayagüez, PR
- 1987-1990 Consultant: Technical Division, Bumble Bee International (Tuna Factory), Mayagüez, PR
- 1987-1990 Consultant: Production Division, Starkist Caribe (Tuna Factory), Mayagüez, PR
- 1978-1980 Mechanical Engineer: Technical Division, Comisión Técnica Mixta de Salto Grande, (Binational Hydroelectric Project: total cost of project: \$2 billion US dollars), Buenos Aires, Argentina
- 1977-1978 Mechanical Engineer: Technical Division, Fábricas Nacionales de Cerveza (Brewery), Montevideo, Uruguay

III) **OTHER**

- 1985 Advisor: Uruguayan Institute for Standardization (UNIT) on matters of engineering aspects of food and international standards

SHORT COURSES TAUGHT

- August 2007 SIFST Workshop on Food Powders Technology. Singapore Institute of Food Science & Technology. Singapore.
- September 2004 Optimización del Manego de Polvos – Prop. físicas y Aplicaciones de Interés para la Industria de Alimentos. Asociación Argentina de Tecnólogos Alimentarios, Buenos Aires, Argentina.
- June 2002 Fundamentals of Water Activity-Dehydration/Drying and Water Activity. IFT Short Course Series (a team of 9 instructors) Anaheim, CA.

- June 2002 Fundamentals of Water Activity-Water Activity Prediction. IFT Short Course Series (a team of 9 instructors). Anaheim, CA.
- June 2002 Food Powder Technology and Utilization-Physicochemical Properties of Food Powders. IFT Short Course Series (a team of 8 instructors) Anaheim, CA.
- May 2002 Nonthermal Processing of Foods. University of Lleida, Spain.
- August 2001 Better Process Control School: Instruction for Supervisors of Food Processing Plants in Charge of Processing and Closure Operations as Prescribed by the Food and Drug Administration (a team of 6 instructors). Puebla, Mexico.
- February 2001 Better Process Control School: Instruction for Supervisors of Food Processing Plants in Charge of Processing and Closure Operations as Prescribed by the Food and Drug Administration (a team of 3 instructors). Pamplona, Spain.
- November 2000 Dehydration of Foods. (Part of a team of 3 instructors) College of Engineering, University of Uruguay, Montevideo, Uruguay.
- November 2000 Nonthermal Processing of Foods. University of Las Américas, Puebla, México.
- August 2000 Nonthermal Processing of Foods. Asociación Argentina de Tecnología de Alimentos, Buenos Aires, Argentina.
- July 2000 Nonthermal Technologies in Food Processing and Bioprocessing. (a team of 5 instructors) 93rd Annual International Meeting of ASAE, Milwaukee, WI.
- May 2000 Nonthermal Processing of Foods. Universidad Nacional del Litoral, Santa Fé, Argentina.
- May 2000 Nonthermal Processing of Foods. Universidad de Chile, Santiago, Chile.
- May 2000 Nonthermal Processing of Foods. Catholic University, Colonia, Uruguay.

March 2000	Better Process Control School: Instruction for Supervisors of Food Processing Plants in Charge of Processing and Closure Operations as Prescribed by the Food and Drug Administration (a team of 3 instructors). Murcia, Spain.
Nov-Dec 1999	Advances in Food Engineering. University of Uruguay, Montevideo, Uruguay.
July 1999	Pulsed Electric Fields. An Update. (a team of 15 instructors), IFT Short Course Series, Chicago, IL.
July 1999	Alternative Technologies to Process Foods. (a team of 15 instructors), IFT Short Course Series, Chicago, IL.
May 1999	Nonthermal Processing of Food. Polytechnic University of Cartagena, Spain.
April 1999	Advances in Pulsed Electric Fields and High Hydrostatic Pressure. (a team of 10 instructors) Washington State University, Pullman, WA.
December 1998	Nonthermal Processing of Foods. National Polytechnic Institute, México City.
September 1998	Nonthermal Processing of Foods. Food Research Center (CIAL), Medellín, Colombia.
August 1998	Nonthermal Processing of Foods. University of Montevideo, Uruguay.
May 1998	An Update on Food Preservation Technology. (a team of 6 instructors) Food and Agriculture Technical Institute (AINIA), Valencia, Spain.
March 1998	Nonthermal Processing of Foods. Polytechnic University of Valencia, Spain.
December 1997	Nonthermal Processing of Foods. PLAPIQUI Institute, Bahia Blanca, Argentina.
October 1997	Nonthermal Processing Foods. Mexican Association of Food Technologists (ATAM) Annual Meeting, Mazatlán, México.

- October 1997 Food Rheology. (a team of 10 instructors) Menéndez-Pelayo International University, Valencia, Spain.
- September 1997 Nonthermal Processing of Foods. University of Buenos Aires, Argentina.
- August 1997 Nonthermal Processing of Foods. University of Uruguay, Montevideo, Uruguay.
- December 1996 Physical Properties of Foods. Campinas State University, Sao Paulo, Brazil.
- September 1996 Pulsed Power Technologies to Preserve Foods. Universidad de Las Américas, Puebla, México.
- August 1996 New Technologies to Preserve Foods. Universidad de La Sabana, Bogotá, Colombia.
- April 1996 Texture as a Quality Factor in Food Products. University of Lleida, Spain.
- April 1996 Nonthermal Technologies to Preserve Foods. Mexican Institute of Chemical Engineers, Guadalajara, México.
- September 1995 New Technologies to Preserve Foods. Universidad Central, Caracas, Venezuela.
- March 1995 Cooling/Freezing Technology. (a team of 7 instructors) Postharvest Institute for Perishables, University of Idaho.
- November 1994 Dehydration of Foods. University of Lleida, Spain.
- April 1994 Physical Properties of Foods. Universidad Nacional Experimental de Los Llanos Ezequiel Zamora, San Carlos, Venezuela.
- April 1994 Physical Properties of Foods. Simón Bolívar University, Caracas, Venezuela.
- March 1994 Advances in Food Engineering. University of Lleida, Spain.
- November 1993 Dehydration of Foods. Graduate School, University of Chihuahua, México.

- August 1993 Advances in Food Processing. Department of Food Science and Engineering, University of Uruguay, Montevideo, Uruguay.
- May 1992 Physical Properties of Foods. Department of Food Science, Catalunya Polytechnic University, Lleida, Spain.
- August 1991 Physical Properties of Foods. Department of Food Science and Engineering, University of Uruguay, Montevideo, Uruguay.
- October 1990 Food Rheology. Faculty and Graduate Students, Department of Chemical and Food Engineering, Universidad de Las Américas, Puebla, México.
- December 1986 Better Process Control School: Instruction for Supervisors of Food Processing Plants in Charge of Processing and Closure Operations as Prescribed by the Food and Drug Administration. (a team of 5 instructors), University of Puerto Rico-USAID Agreement, Manta, Ecuador.

SPECIAL ASSIGNMENTS

- September 2008 Scientific Advisory Board member. Fifth International Conference on High Pressure Bioscience and Biotechnology. San Diego.
- September 2005 International Committee Member. CIBIA V Congreso Iberoamericano de Ingenieria de Alimentos. Puerto Vallarta, Jalisco, Mexico.
- April 2004 International Committee Member: International Conference of Engineering and Food (ICEF 9), Montpellier, France.
- 2003-2008 Chair, Organizing Committee. Food Engineering at Interfaces. 10th International Congress on Engineering and Food (ICEF 10). April 20-24, 2008. Vina del Mar, Chile.
- October 2003 Organizing Committee: 4th Iberoamerican Conference of Food Engineering, Valparaiso, Chile.
- 2003 Institute of Food Technologists Technical Presentation Subcommittee Representative, Chicago, IL.
- 2002- Institute of Food Technologists International Division Technical Program Subcommittee Representative (Annual Program Committee), Chicago, IL.

April 2002	Food Processing Team Leader, NASA Advanced Food Technology Workshop, Johnson Space Center, Houston, TX.
October 2001	International Evaluator: Ramón y Cajal Scholarships, ANEP, Madrid, Spain.
Nov 1998-2000	Panel Member: FDA-IFT Contract on How to Quantify the Destruction Kinetics of Alternative Food Processing Technologies.
Nov 1998-2000	IFT Representative to the American Society of Agricultural Engineers' Advisory Council for the Eighth International Symposium on Animal, Agricultural, and Food Processing Wastes (ISAASFPW 2000).
1997-2000	IFT Food Engineering Division Technical Representative Program Subcommittee (Annual Program Committee), Chicago, IL.
July 1998-present	Washington State University Technical Representative: NC-136/USDA Project.
June 1994	Panel Review: USDA Food and Agricultural Sciences National Needs Graduate Fellowship Program. Washington, DC.
October 1993	Food Technology Representative: University of Chile/Washington State University Workshop. Santiago, Chile
July 1993	Faculty Advisor: Washington State University-Kharkov Agrarian University Exchange Program. (not accepted due to academic schedule conflicts)
July 1992	Faculty Advisor: Washington State University-Kharkov Agrarian University Exchange Program. (not accepted due to academic schedule conflicts)
November 1989	Coordinator: Trip to San Francisco, CA. Delegation of the Chemical Engineering Department of the University of Puerto Rico to attend the Annual Meeting of the AIChE.
November 1988	Coordinator: Trip to Washington, DC. Delegation from Chemical Engineering Department at University of Puerto Rico to attend Annual Meeting of AIChE.
July 1987-1991	National Technical Coordinator for Food Preservation: Fifth Centennial of the Discovery of America, CYTED-D.

- December 1987 Coordinator: Trip to New York. Delegation from Chemical Engineering Department at University of Puerto Rico to attend Annual Meeting of AIChE.
- October 1986 Delegate: University of Puerto Rico at Mayagüez to Sigma Xi Centennial Anniversary, Washington, DC.

ORGANIZATION OF TECHNICAL MEETINGS

- October 2008 ISFE: Food Engineering – Past and Future Directions. Session chair. 14th World Congress of Food Science & Technology, Shanghai, China.
- June 2008 Session Co-chair. Shelf Life International Meeting08. 1st Workshop: New analytical and regulatory approaches for safe food packaging. Ischia, Italy.
- August 2007 Chairperson, Food Processing and Engineering: Tools for Quality Food Production, Session A. 10th Asean Food Conference 2007. Kuala Lumpur, Malaysia.
- November 2003 Member, Organizing Committee: Conference of Food Engineering (CoFE), AIChE, San Francisco, CA.
- July 2003 Symposium Co-chair: Engineering: Solutions to Enhance Food Safety. XII IUFOST (International Union of Food Science and Technology Congress), Chicago, IL.
- July 2003 Symposium Chair: Moderator: International: Food research from around the world. Annual Meeting of IFT. Chicago, IL.
- July 2003 Symposium Chair: Moderator: Pulsed electric fields: An update. Annual Meeting of IFT. Chicago, IL.
- July 2003 Member, Organizing Committee: XII IUFOST (International Union of Food Science and Technology Congress), Chicago, IL.
- June 2002 Symposium Chair: Moderator: The role of IFT in the international food world . Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Symposium Chair: Moderator: Ultra high pressure: Molecular changes in foods. Annual Meeting of the IFT. Anaheim, CA.

- June 2002 IFT Short Course Program Director: Fundamentals of Water Activity. Annual Meeting of the IFT. Anaheim, CA.
- March 2002 Conference Vice-Chair Emerging Technologies to Process Foods. EmerTec 2002, CSIC, Madrid, Spain.
- December 2001 Session Chair: What is New in Pulsed Electric Fields? IFT, Nonthermal Processing Division and EFFoST Workshop on Nonthermal Technologies, Technical University of Berlin, Germany.
- November 2001 Session Chair: New Technologies in Food Engineering. COFE, Reno, NV.
- November 2001 Session Vice Chair: New and Emerging Technologies in the Food Industry. CoFE, Reno, NV.
- November 2001 Conference Co-Chair: Conference of Food Engineering (CoFE), AIChE, Reno, NV.
- November 2001 Poster Session Chair: Conference of Food Engineering (CoFE), AIChE, Reno, NV.
- June 2001 Session Chair: Process Sensors and Indicators. IFT, New Orleans, LA.
- June 2001 Symposium Chair: New Food Preservation Technologies. IFT, New Orleans, LA.
- March 2001 Organizing Committee: Nonthermal Processing of Food Workshop, Newark, DE.
- March 2001 Organizing Committee: Third Iberoamerican Conference of Food Engineering (CIBIA III), Valencia, Spain.
- March 2001 Chair: Emerging Technologies in Food Stability I. Iberoamerican Congress of Food Engineering (CIBIA III), Valencia, Spain.
- March 2001 Chair: Emerging Technologies in Food Stability II. Iberoamerican Congress of Food Engineering (CIBIA III), Valencia, Spain.
- November 2000 Session Chair: Dehydration of Foods. AIChE. Annual Meeting, Los Angeles, CA.

- June 2000 Symposium Chair: Novel Nonthermal Technologies to Process Foods. Annual Meeting of the Institute of Food Technologists (IFT), Dallas, TX.
- April 2000 Conference Vice-President: International Conference of Engineering and Food (ICEF 8), Universidad de las Américas, Puebla, Mexico.
- April 2000 International Committee President: ICEF 8, Universidad de las Américas, Puebla, México.
- January 2000 Organizing Committee: Nonthermal Processing of Food Workshop, Portland, OR.
- November 1999 Conference Chair: Conference of Food Engineering (CoFE), AIChE. Dallas, TX.
- November 1999 Poster Session Chair: Conference of Food Engineering (CoFE), AIChE, Dallas, TX.
- September 1999 Session Chair: Novel Technologies in Food Processing. Food Micro'99, Veldhoven, The Netherlands.
- July 1999 Symposium Chair: Nonthermal Processing of Foods. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Symposium Chair: Dehydration of Foods. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Symposium Chair: Ozone in Food Processing. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Session Chair: Food Processing Engineering. Annual Meeting of the IFT. Chicago, IL.
- April 1999 Chair: Nonthermal Processing of Food Workshop. Washington State University, Pullman, WA.
- September 1998 Organizing Committee: Automatic Control of Food and Biological Processes (ACoFoP) IV. Göteborg, Sweden.
- June 1998 Symposium Chair: Preservation of Foods by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.

- June 1998 Session Chair: Thermal Processing. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Session Chair: Emerging Technologies in Food Preservation. Annual Meeting of the IFT. Atlanta, GA.
- April 1998 Conference Chair: Society of Manufacturing Engineering, Chicago, IL.
- March 1998 Organizing Committee: Second Iberoamerican Conference of Food Engineering, Bahia Blanca, Argentina.
- November 1997 Conference Chair: CoFE. AIChE. Los Angeles, CA.
- November 1997 Poster Session Chair: Physical Properties of Foods. CoFE, AIChE, Los Angeles, CA.
- November 1997 Poster Session Chair: Food Dehydration and Concentration. CoFE, AIChE, Los Angeles, CA.
- November 1997 Poster Session Chair: Food Processing. CoFE, AIChE, Los Angeles, CA.
- June 1997 Session Chair: Food Rheology. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Session Chair: Food Extrusion. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Symposium Chair: Emerging Technologies in Food Processing. Annual Meeting of the IFT. Orlando, FL.
- November 1995 Session Chair: International Conference on Advanced Technologies in Sterilization and Safety of Foods and Non-Food Products. Sponsored by the European Union, Valencia, Spain.
- November 1995 Organizing Committee: First Iberoamerican Conference of Food Engineering, Campinas, Brazil.
- November 1995 Organizing Committee: CoFE, AIChE, Chicago, IL
- November 1995 Chair: Moisture Relations in Food. CoFE, AIChE, Chicago, IL.

- June 1995 Chair: Sterilization Technologies. Annual Meeting of the IFT. Anaheim, CA.
- June 1994 Organizing Committee: International Symposium on Properties of Water (ISOPOW) Practicum II, Puebla, México.
- June 1994 Session Chair: Glass Transition and Water Activity in Foods. International Symposium on Properties of Water (ISOPOW) Practicum, II. Puebla, México.
- July 1993 Session Chair: Engineering/Modeling I. Annual Meeting of the IFT. Chicago, IL.
- Feb 1993-1994 Organizing Committee: Food Preservation by Moisture Control. ISOPOW Practicum II Puebla, México.
- February 1993 Organizing Committee: CoFE, AIChE, Chicago, IL.
- February 1993 Session Chair: Rheology of Food Systems. CoFE, AIChE, Chicago, IL.
- February 1993 Session Chair: Transport Phenomena in Dispersed Systems. CoFE, AIChE, Chicago, IL.
- February 1993 Session Chair: Dehydration of Foods. CoFE, AIChE, Chicago, IL.
- August 1992 Session Chair: Rheology and Texture of Foods II. CoFE, AIChE Summer National Meeting, Minneapolis, MN.
- March 1991 Session Chair: Dehydration of Foods. CoFE, AIChE, Chicago, IL.
- November 1990 Session Chair: Drying of Foods. Annual Meeting of the AIChE, Chicago, IL.
- July 1990 Chair of the Four Plenary Sessions: 26th Annual Meeting of the Caribbean Food Crops Society (Theme: Germplasm and Biotechnology in Crop Improvement), Mayagüez, PR.
- May 1989 Chair: Second Puerto Rican Meeting for Intermediate Moisture Foods. Río Piedras, PR.
- March 1989 Session Chair: Sludge Dewatering. Second Annual Meeting of the American Filtration Society, Pittsburgh, PA.

February 1989	Chair: First Puerto Rican Meeting for Intermediate Moisture Foods. Mayagüez, PR.
November 1988	Session Chair: Rheological Properties of Foods. Annual Meeting of the AIChE. Washington, DC.
December 1985	Session Chair: Food Technology. 11th Interamerican Congress of Chemical Engineering, San Juan, PR.

PROFESSIONAL SOCIETY OFFICES

September 2002	Chair-elect: Nonthermal Processing Division, IFT
September 2001-2004	Councilor: Food Engineering Division, IFT
September 2001-2002	Chair: International Division, IFT
September 2000-2001	Chair-Elect: International Division, IFT
September 2000-present	Editor: Food Engineering Division Newsletter, IFT
September 1998–2000	Technical Program Subcommittee Representative: Food Engineering Division, IFT
September 1999-2000	Chair: Food Engineering Division, IFT
September 1998-2001	Councilor: Nonthermal Processing Division, IFT
September 1998	Chair: Food Engineering Division, IFT
September 1997	Chair-Elect: Food Engineering Division, IFT
September 1996	Secretary: Food Engineering Division, IFT
September 1996-1999	Member-at-Large: International Division, IFT
June 1993-1996	Editor: Food Engineering Division Newsletter, IFT
September 1991-1993	Associate Editor: Food Engineering Division Newsletter, IFT

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In, B-L., G. V. Barbosa-Cánovas, B. G. Swanson, P. D. Pedrow, R. Olsen and Q. Zhang. 2000. Continuous Flow Electrical Treatment of Flowable Food Products. Part III. US Patent No. 6,019,031.

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EDITOR

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| 2008-present | <i>Food Engineering Reviews (FERE)</i> , Springer, New York |
| 1998-present | <i>Food Preservation Technologies Series</i> , CRC Press, Boca Raton, FL |
| 1998-2001 | <i>Journal of Innovative Food Science and Emerging Technologies</i> , Elsevier Science, Oxford, UK |
| 1998-present | <i>Food Engineering Theme</i> , Encyclopedia of Life Supporting Systems (EOLSS), United Nations Educational, Scientific, and Cultural Organization (UNESCO), Paris, France |
| 1995-present | <i>Food Engineering Series</i> , Springer, New York, NY |
| 1995-present | <i>Journal of Food Science and Technology International</i> , SAGE Publishers, London, UK |

EDITORIAL BOARDS

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|-----------|--|
| 2007-2011 | Consejo Editorial. <i>Agrollania</i> . Revista De Ciencia y Tecnología. Universidad Nacional Experimental de Los Llanos Occidentales, Ezequiel Zamora. San Carlos, Venezuela |
| 2006-2009 | Member of Editorial Committee, <i>University and Science</i> , Villahermosa, Tabasco, México |

2000-2005	<i>Journal of Food Science</i> , IFT, Chicago, IL.
1999-present	<i>Food Science and Technology Book Series</i> , Processing and Preservation, Marcel Dekker, NY.
1998-2001	<i>InSight</i> , Academic Press, London, UK.
1998-present	<i>International Journal of Food Properties</i> , Marcel Dekker, NY.
1997-2004	<i>Lebensmittel-Wissenschaft und-Technologie</i> , Academic Press, London, UK.
1996-present	<i>Journal of Food Process Engineering</i> , Nutrition Press, Turnbull, CT.
1994-2004	<i>Journal of Food Engineering</i> , Elsevier Applied Science, Essex, UK.
1993-2001	<i>BIOTAM</i> , Universidad Autónoma de Tamaulipas, Tamaulipas, México.
1991-1995	<i>Spanish Journal of Food Science and Technology</i> . Spanish Research Council, Valencia, Spain.
1988-present	<i>Fluid/Particle Separation Journal</i> . American Filtration and Separation Society, Houston, TX.

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Handbook of Food Engineering Practice. K. Valentas, E. Rotstein and R.P. Singh, Eds. Food Technology, 1998.

Rheological Methods in Food Process Engineering. J.F. Steffe. American Association of Cereal Chemists, 1992.

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a) **Theses**

The Role of Surface Affinity and Interactions in the Segregation of Food Powders. Doctoral Dissertation, University of Massachusetts, Amherst. February 1985.

Time and Shear Rate Dependent Flow Characteristics of Selected Fluid Foods. Master's Thesis, University of Massachusetts, Amherst. September 1982.

b) **Books***b.1) Published*

Gutiérrez-López, G.F., G.V. Barbosa-Cánovas, J. Welti-Chanes, E. Parada-Arias, eds. 2008. *Food Engineering: Integrated Approaches*. New York: Springer.

Barbosa-Cánovas, G.V., ed. 2007. *Food Engineering*. Encyclopedia of Life Support Systems. Russian edition. Moscow, Russia: Magister Press.

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- b.2) In Press*
- Barbosa-Cánovas, Gustavo V., Alan Mortimer, Dave Lineback, Walter Spiess, Ken Buckle, and Paul Colonna, eds. Global Issues in Food Science and Technology. UFoST World Congress. Academic Press, Elsevier, USA.
- b.3) In Preparation*
- Aguilera, José M., Gustavo Barbosa-Cánovas, Recardo Simpson, and Jorge Welti-Chanes, eds. *Food Engineering Interfaces*. ICEP 10 presentations. New York: Springer.
- Barbosa-Cánovas, G.V. and Daniela Aguirre-Bermúdez-Aguirre. *Handbook of Advanced Technologies in Food Processing*.

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c) **Book Chapters**

c.1) *Published Chapters*

➤ 2008

Barbosa-Cánovas, G.V. and P. Juliano. 2008. Food Sterilization by combining High Pressure and Thermal Energy. In: *Food Engineering: Integrated Approaches*, G.F. Gutiérrez-López, G.V. Barbosa-Cánovas, J. Welti-Chanes, E. Parada Arias, pp. 9-46. New York: Springer.

Bermúdez-Aguirre, Daniela and G.V. Barbosa-Cánovas. 2008. Scanning Electron Microscopy of Thermo-Sonicated *Listeria Innocua Cells*. In: *Food Engineering: Integrated Approaches*, G.F. Gutiérrez-López, G.V. Barbosa-Cánovas, J. Welti-Chanes, E. Parada Arias, pp. 287-294. New York: Springer.

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Palou, Enrique, Aurelio Lopez-Malo, Gustavo V. Barbosa-Canovas, and Barry G. Swanson. 2007. High-Pressure Treatment in Food Preservation. In: *Handbook of Food Preservation*, M. Shafiur Rahman, ed. 2nd Edition. Boca Raton: CRC Press.

Vega-Mercado, Humberto, M. Marcela Gongora-Nieto, Gustavo V. Barbosa Cánovas, and Barry G. Swanson. 2007. Pulsed Electric Fields in Food Preservation. In: *Handbook of Food Preservation*, M. Shafiur Rahman, ed. 2nd Edition. Boca Raton: CRC Press.

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Barbosa-Cánovas, Gustavo V. and Bilge Altunakar. 2006. Pulsed Electric Fields Processing of Foods: An overview. In: *Pulsed Electric Field Technology for Food Industry: Fundamentals and Applications*, J. Raso and V. Heinz, eds. New York: Springer.

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Barbosa-Cánovas, G.V., M.M. Góngora-Nieto, J.J. Rodriguez, and B.G. Swanson. 2005. Nonthermal Processing of Foods and Emerging Technologies. In: *Food Engineering. Encyclopedia of Life Support Sciences*, G.V. Barbosa-Cánovas, ed. Paris: EOLSS Publishers/UNESCO. pp. 575-593.

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e) **Proceedings**

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- e.2) *Proceedings in Press*
- e.3) *Proceedings in preparation (proposed)*

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f) **Other Peer Reviewed Publications**

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Barbosa-Cánovas, G.V. 1990. Intermediate Moisture Foods from Puerto Rico. In: Inventario de Alimentos de Humedad Intermedia Tradicionales de Ibero-América. pp. 301-314.

g) Scientific and Professional Meeting Presentations

g.1) Invited Lecturer

October 2008 ISFE: Linking food engineers from around the world. 14th World Congress of Food Science & Technology, Shanghai, China. (Invited lecturer)

August 2007 Advances in Non-thermal Processing of Food. 10th Asean Food Conference 2007. Kuala Lumpur, Malaysia. (Lead Speaker)

June 2007 Food Sterilisation assisted by high pressure processing. Research issues facing the global food industry. New Zealand Food Safety (NZIFST) Conference. Town Hall, Wellington, New Zealand. (Keynote speaker)

March 2006 Online lecture: "Food" Presented to students at Packaging Brody, Inc. Duluth, Georgia.

October 2005 Esterilizacion de alimentos combinando alta presion y calor. CIBIA V Congreso Iberoamericano de Ingenieria de Alimentos. Puerto Vallarta, Mexico.

October 2005 Emerging food technologies as related to quality of foods. II Ruolo delle tecnologie alimentary emergenti in relazione alla qualitia degli alimento. Alghero, Italy.

October 2004 El Futuro...Reto Alimentario. IX Simposium Internacional de Ingenieria en Industrias Alimentarias. Santiago, Chile.

- October 2004 Nuevas Tecnologías para Procesar Alimentos. XIV Simposio de Ciencia y Tecnología de Alimentos. Mérida Yucatán, Mexico.
- October 2004 Retrospectiva y Perspectiva de la Tecnología Alimentaria en Latinoamérica. XIV Simposio de Ciencia y Tecnología de Alimentos. Mérida Yucatán, Mexico.
- June 2004 Nonthermal Technologies for Food Processing. International Congress Food Science & Biotechnology in Developing Countries. Durango, Mexico.
- March 2004 Non-thermal processing technologies for product development. Part III: Novel Processing Technologies. International Commission on Microbiological Specification for Foods (ICMSF). Shanghai, China.
- October 2003 Cinética de inactivación de microorganismos con pulsos eléctricos. IV Congreso Iberoamericano de Ingeniería de Alimentos (CIBIA). Valparaíso, Chile.
- July 2003 Adaptation of Classical Processes to New Technical Developments and New Quality Requirements. XII IUFOST (International Union of Food Science and Technology Congress), Chicago, IL.
- July 2003 Food enzymes as affected by high intensity pulsed electric fields Annual Meeting of IFT. Chicago, IL.
- July 2003 Potential food preservation technologies for future space missions. Annual Meeting of IFT. Chicago, IL.
- October 2002 Pulsed Electric Fields at the Industrial Level. 2nd Spanish Congress of Food Engineering. Lleida, Spain.
- July 2002 Modeling New Food Processes for Microbial Inactivation. 1st International Conference on Microbiological Risk Assessment: Foodborne Hazards. College Park, Maryland.
- July 2002 Modeling of some selected Nonthermal Processing Technologies. FDA-USDA Conference on Risk Assessment. Washington, D.C.
- June 2002 IFT International Division, Myth or Reality? Annual Meeting of the Institute of Food Technologists. Anaheim, CA.

- June 2002 IFT Division Lecture. What are we cooking (in food processing) for tomorrow? Nonthermal Processing Division, Annual Meeting of the Institute of Food Technologists. Anaheim, CA.
- May 2002 IFT Division Lecturer, Nonthermal Processing Division, IFT Annual Meeting, Anaheim, CA,
- April 2002 Processing Foods for Tomorrow. NASA Conference on Food Processing. Houston, TX.
- April 2002 Advances in Food Engineering. Eighth Cuban Congress on Food Science and Technology (CICTA 8). Havana, Cuba. (Keynote speaker).
- March 2002 Preservation of Foods by Pulsed Electric Fields. Emerging Technology 2002. Madrid, Spain.
- March 2002 Developing Intervention Strategies: Emerging Technologies for Inactivating Bacteria. Food Safety Summit. Washington DC.
- December 2001 Microbial Aspects of Nonthermal Processing of Foods. Polytechnic University of Cartagena. Murcia, Spain.
- November 2001 High Pressure Preprocessing of Vegetables. Fundación Chile and FEPACH. Santiago, Chile. (Keynote Speaker).
- November 2001 Nonthermal Preservation of Foods. Mexican Association of Food Science and Technology (ATAM). Azcapotzalco, Mexico. (Keynote speaker).
- November 2001 Tecnología y Tendencias: Procesado de frutas y hortalizas.... 2nd Congreso Internacional. La Agroindustria en el SIGLO XXI. Santiago, Chile.
- November 2001 Tecnologías Emergentes para el Procesamiento de Alimentos y Begidas. XXXII Congreso Nacional de Ciencia y Tecnología de los Alimentos. (ATAM). Azcapotzalco, Mexico.
- October 2001 Nonthermal Preservation of Foods. Brazilian Congress on Microbiology. Foz de Iguazú, Brazil.
- September 2001 Microbial Inactivation in Foods by Pulsed Magnetic Fields. XII International Congress on Biochemical Engineering. Veracruz, Mexico.

- July 2001 Nonthermal processing of foods. Australian Society of Food Science and Technology. Adelaide, Australia (Keynote Speaker).
- July 2001 Dehydration of foods. Australian Society of Food Science and Technology. Adelaide, Australia.
- July 2001 Dehydration of Foods. Past, Present and Future. International Drying Symposium. Veracruz, México.
- July 2001 Nonthermal processing of foods. Ecuatorian Society of Food Science and Technology. Quito, Ecuador.
- June 2001 Food engineering education in Mexico, Central and South America. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Novel processing technologies and packaging: Effects of ultra high pressure and pasteurizing doses of irradiation. Annual Meeting of IFT. New Orleans, LA.
- May 2001 The effect of high hydrostatic pressure on lipids. American Oil Chemists' Society. Minneapolis, MN.
- April 2001 Keynote Speaker, Second International Congress of Food and Agriculture, Fundación Chile and FEPACH, Santiago, Chile.
- April 2001 Pulsed Electric Fields: Microbial and Enzyme Inactivation Mechanisms. Symposium on Pulsed Electric Fields, International Union of Food Science and Technology (IUFoST) Conference. Seoul, South Korea.
- March 2001 Keynote Speaker, Australian Society of Food Science and Technology Annual Meeting, Adelaide, Australia.
- March 2001 Nonthermal Processing of Foods. Instituto del Frío. Madrid, Spain.
- March 2001 High Intensity Pulsed Electric Fields for Food Preservation. III Iberoamerican Congress in Food Engineering. Valencia, Spain.
- March 2001 Nonthermal Food Processing. III Iberoamerican Congress in Food Engineering. Valencia, Spain.
- March 2001 Fruits and Vegetables Blanching Using Microwaves. III Iberoamerican Congress in Food Engineering. Valencia, Spain.

- February 2001 Nonthermal Processing of Foods. Annual Symposium on Emerging Technologies to Process Foods, Campden & Charleywood. Campden, U.K.
- February 2001 Developments in PEF–USA research and consortium activities. International Seminar on Electric Field Processing, Campden & Chorleywood Food Research Assoc. Group. Gloucestershire, UK.
- February 2001 Advances in Dehydration of Foods. Food Science and Technology Department, University of Reading, U.K.
- November 2000 Nonthermal Processing of Foods. College of Agronomy, University of Uruguay, Uruguay.
- November 2000 Nonthermal Processing of Foods. National Academy of Engineering, Montevideo, Uruguay.
- November 2000 Advances in Food Dehydration. Peruvian Symposium in Food Technology. San Ignacio de Loyola University, Lima, Perú.
- November 2000 Nonthermal Processing of Foods. Peruvian Symposium in Food Technology. San Ignacio de Loyola University, Lima, Perú.
- November 2000 Plenary Speaker, Food, Pharmaceutical and Bioengineering Division, American Institute of Chemical Engineers Annual Meeting, Los Angeles, CA.
- November 2000 Nonthermal processing of foods. National Food Processors Association Annual Meeting. Chicago, IL.
- September 2000 Nuevas Tecnologías en la Conservación de Alimentos. 12th Spanish Congress on Food Microbiology. Oviedo, Spain.
- August 2000 Innovation in Pulsed Electric Fields. 87th Annual Meeting of the International Association for Food Protection. Atlanta, GA.
- August 2000 Food Preservation by Pulsed Electric Fields. IAMFES Annual Meeting. Atlanta, GA.
- July 2000 Food Preservation by Pulsed Electric Fields. The Society for engineering in agricultural, Food, and Biological Systems (ASAE) Annual International Meeting. Milwaukee, Wisconsin, WI.

June 2000	Food preservation by magnetic fields. Annual Meeting of the IFT. Dallas, TX.
June 2000	Pulsed electric fields. Annual Meeting of the IFT. Dallas, TX.
June 2000	Pulsed light, x-ray, oscillating magnetic field. Annual Meeting of the IFT. Dallas, TX.
June 2000	Oscillating Magnetic Fields. Annual Meeting of the IFT. Dallas, TX.
June 2000	Electromagnetic Approaches to Process Foods. IFT/FDA Contract Symposium, IFT Annual Meeting. Dallas, TX.
May 2000	Tratamientos por Procesos no térmicos. XI Seminario latinoamericano y del caribe. Santiago, Chile.
March 2000	Nonthermal Processing of foods. IFT Scientific lecture, Chicago Section. Chicago, IL.
January 2000	Nonthermal Processing. 86th Annual Northwest Food Processors Association, Eleventh Annual Pacific Northwest Regional IFT Meeting. Portland, OR.
December 1999	Nonthermal Processing of foods IFT Scientific lecture, San Joaquín Valley section. Fresno, CA.
November 1999	Emerging Technologies in the U.S. European Conference on Emerging Food Science and Technology (EFFoST). Tampere, Finland.
October 1999	Nonthermal Processing of foods. IFT Scientific lecture, Kansas Section, Kansas City, MO.
October 1999	New Technologies for the Preservation of foods. Action-RDTA, AGIR and L'ACTIA. Bordeaux, France.
October 1999	Nonthermal Processing of foods. Anheuser-Busch Inc. St. Louis, MO.
September 1999	Pulsed Electric Fields. Food Quality Conference & Expo'99. San Francisco, CA.

- September 1999 New Technologies for Food Preservation. Food Micro'99. Veldhoven, the Netherlands.
- July 1999 Food Engineering Education, looking into the next Century. Universidad de la Sabana, Bogotá, Colombia.
- July 1999 Nonthermal Processing Technology. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Ethnic Foods of Latin America. Annual Meeting of the IFT. Chicago, IL.
- July 1999 A Critical Review of Nonthermal Food Processing. Annual Meeting of the IFT. Chicago, IL.
- July 1999 A Critical Review of Food Dehydration. Annual Meeting of the IFT. Chicago, IL.
- May 1999 Nonthermal Processing of foods. AMIDIQ Annual Meeting. Puerto Vallarta, México.
- May 1999 Preservation of Foods by Pulsed Electric Fields. EPRI Workshop on Electromagnetic Technologies. Minneapolis, MI.
- April 1999 Food Powders Technology. Mexican National University (UNAM), México City, México.
- April 1999 New Technologies for Better Foods. Mexican National University (UNAM), Mexico City.
- March 1999 Nonthermal Processing of Foods. International Food Microbiology Conference. The Netherlands.
- February 1999 Nonthermal Processing of Foods. IFT Scientific Lecture, British Institute of Food Technologists. London, UK
- January 1999 Nonthermal Processing of Foods. IFT Scientific Lecture. Lake Erie Chapter, NY.
- October 1998 The Center for Nonthermal Processing of Foods at Washington State University. Jornada Sobre la Ingeniería de Alimentos en Iberoamérica. Universidad Politécnica de Valencia, Spain.
- October 1998 Physical Characterization of Food Powders. Nestlé Research & Development Center, New Milford, CT.

- September 1998 Nonthermal Preservation of Foods. Plenary Lecture, NIZO Food Research Center. Arnhem, The Netherlands.
- September 1998 New Technologies in Food Processing. Annual Meeting of the Guatemalan Association of Food Technology, Guatemala City.
- July 1998 Nonthermal Preservation of Foods. Annual Meeting of the Brazilian Society of Food Science and Technology. R o de Janeiro, Brazil.
- June 1998 Mechanism of Bacterial Inactivation by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Mechanism of PEF Microorganism and Enzyme Inactivation. Annual Meeting of the IFT. Atlanta, GA.
- May-June 1998 Importance of Water in Foods Preserved by Nonthermal Processes. ISOPOW 7, Helsinki, Finland.
- April 1998 Food Pasteurization Using High-Intensity Pulsed Electric Fields: Promising New Technology for Non-Thermal Pasteurization for Eggs. Second International Symposium on Egg Nutrition and Newly Emerging Ovo-Technologies. Banff, Alberta, Canada.
- April 1998 Dehydration of Food: An Update. Conference of the Society of Manufacturing Engineering. Chicago, IL.
- March 1998 What's New in Food Processing? European Physical Properties of Food Workshop, IATA. Valencia, Spain.
- March 1998 Preservation of Foods by Pulsed Electric Fields. IATA Lecture Series. Valencia, Spain.
- March 1998 Nonthermal Processing of Foods. AINIA. Valencia, Spain.
- March 1998 Nonthermal Processing of Food: Critical Review. Second Iberoamerican Congress on Food Engineering. Bah a Blanca, Argentina.
- February 1998 Electrotechnologies in Food Preservation. The Netherlands Center for Food Technology (TNO). Ziest, The Netherlands.
- February 1998 An Update on Food Powder Technology. Nestl  Research and Development Center. Marysville, OH.

- January 1998 Food Preservation by Pulsed Electric Fields. First European Workshop on High Electric Field Pulses (HELP). Technical University of Berlin, Germany.
- October 1997 Preservation of Food by Nonconventional Approaches. ATAM. Mazatlán, México.
- September 1997 Food Preservation Using Electric Methods. Latin American and Caribbean Association of Food Science and Technology Congress (ALACCTA). Buenos Aires, Argentina.
- August 1997 The Future of Food Engineering. Facultad de Química. Montevideo, Uruguay.
- June 1997 Inactivation of Foodborne Pathogens. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Emerging Technologies in Food Processing. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Engineering Strategies for Cost Effective Research and Development in Foods. Annual Meeting of the IFT. Orlando, FL.
- May 1997 Preservation of Food by Pulsed Electric Fields. Tetra Pak Food Processing Technology Division. Lund, Sweden.
- May 1997 Food Processing by Nonthermal Techniques. University of Lleida, Spain.
- December 1996 Introduction to Pulsed Electric Fields Technologies. Pulsed Energy Technologies Seminar, Australian Food Industry Science Centre. Melbourne, Australia (Live Telecast Presentation from Pullman, WA).
- December 1996 Preservation of Foods by Pulsed Electric Fields Technologies. Pulsed Energy Technologies Seminar, Australian Food Industry Science Centre. Melbourne, Australia (Live Telecast Presentation from Pullman, WA).
- October 1996 Oscillating Magnetic Fields for Food Processing. Symposium on New Technologies, Nestlé Research Center. Lausanne, Switzerland.

- September 1996 Emerging Technologies in Food Processing. Instituto Politécnico Nacional. México City, México.
- June 1996 An International Perspective on Food Engineering Education within the Food Science Curriculum. Annual Meeting of the IFT. New Orleans, LA.
- April 1996 Nonthermal Electrical Pasteurization Methods. International Symposium on Minimal Processing and Ready Made Foods, SIK, The Swedish Institute for Food Research. Göteborg, Sweden.
- April 1996 Pulsed Power Technologies in Food Processing. Unilever Research Laboratorium. Vlaardingen, The Netherlands.
- March 1996 New Technologies to Preserve Foods by Nonthermal Methods. First Venezuelan Congress on Food Science and Technology. Food Science and Technology Institute, Caracas, Venezuela.
- March 1996 New Trends in Minimally Processed Foods. First Venezuelan Congress on Food Science and Technology. Food Science and Technology Institute, Caracas, Venezuela.
- November 1995 Biological Effects Induced by Pulsed Electric Fields of High Intensity. International Conference on Advanced Technologies in Sterilization and Safety of Foods and Non-Food Products, Sponsored by the European Union. Valencia, Spain.
- November 1995 Preservation of Foods by Pulsed Electric Fields: System Design and Key Components. International Conference on Advanced Technologies in Sterilization and Safety of Foods and Non-Food Products, Sponsored by the European Union. Valencia, Spain.
- November 1995 Processing of Foods by Pulsed Electric Fields: Key Variables. First Iberoamerican CoFE. Campinas, Brazil.
- March 1995 Fractal Analysis of Coffee Agglomerates. Procter and Gamble. Cincinnati, OH.
- March 1995 Fractals, Electron Microscopy and Ingenuity in the Characterization of Food Powders. First Biotechnology and Engineering Congress. University of Las Americas, Puebla, México.

- October 1994 New Technologies for the Preservation of Foods. First International Congress of Biochemical Engineering. México City, México.
- June 1994 State-of-the-Art Technologies for the Stabilization of Foods by Nonthermal Processes: Physical Methods. International Symposium on Properties of Water, Practicum II. Puebla, México.
- April 1994 Preservation of Food by Nonthermal Treatments. Central University, Caracas, Venezuela.
- March 1994 Physical and Chemical Changes in Foods Processed by Combined Methods. Preservation of Fruits by Combined Methods. Valencia Polytechnic University, Spain.
- February 1994 Nonthermal Processes to Preserve Foods. Second Food Science and Engineering Congress. University of Las Americas, Puebla, México.
- February 1994 Physical Properties of Food Powders. University of Chihuahua, México.
- July 1993 4-Hexylresorcinol as an Inhibitor of Enzymatic Browning in Processed Apple Products. Advances in Enzyme Technology as Applied to Fruits and Vegetables Symposium, Annual Meeting of the IFT. Chicago, IL.
- May 1992 Food Science and Technology in USA. Food Engineering Department, Valencia Polytechnic University, Spain.
- May 1992 Preservation of Apples by Combined Methods. Department of Food Science, Catalunya Polytechnic University, Lleida, Spain.
- August 1991 Physical Characterization of Semi-Liquid Food Products. International Seminar on Post Harvesting of Fruits and Vegetables. Chillán, Chile.

g.2) *Invited Panelist*

- June 2002 International Division Roundtable. Annual Meeting of the Institute of Food Technologists. Anaheim, CA.

g.3) *Contributed Presentations*

- August 2008 Pulsed electric fields and ultrasound processing. Presentation. 95th Annual Meeting International Association of Food Protection (IAFP). Columbus, OH.
- July 2008 Microstructural effects in thermo-sonicated yogurt and other dairy products: Understanding and exploiting the science. Presentation. American Dairy Science Association Annual Meeting (ADSA). Indianapolis, IN.
- July 2008 Microbial safety and bioactive efficacy: Effectiveness of pulsed electric field processing of dairy fluids. Presentation. American Dairy Science Association Annual Meeting (ADSA). Indianapolis, IN.
- June-July 2008 Advances and challenges in adopting certain food processing techniques that ensure product safety. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Electrodepositing of milk materials during Pulsed Electric Fields processing. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Determination of Allura Red (Red # 40) by Reverse-Phase High-Performance Liquid Chromatography (RP-HPLC) in strawberry flavored milk under Pulsed Electric Field Processing. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Inactivation of *Bacillus cereus* spores under Pulsed electric Fields, mild thermal treatment and nisin in skim and whole milk. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Modeling the inactivation of *Listeria innocua* in raw whole milk by thermo-sonication treatments. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 High hydrostatic pressure processing of fresh orange juice for microbial reduction. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 High hydrostatic pressure processed pear nectar to reduce microbial load. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.

- June-July 2008 Effect of storage on the rheological characteristics and viability of probiotics of stirred yogurt manufactured with sonicated starter cultures. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Combined effect of pulsed electric fields and selected antimicrobials on the shelf-life of apple cider. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Effect of selected engineering variables on performance of a pulsed electric field system. Presentation. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- June-July 2008 Modeling microbial inactivation of *E. coli* ATCC 11775 after exposure to pulsed electric fields and selected antimicrobials. Institute of Food Technologists (IFT) Annual Meeting. New Orleans, LA.
- April 2008 Recent advances in emerging nonthermal technologies. Presentation. International Congress on Engineering and Food ICEF 10. Viña del Mar, Chile.
- July-Aug 2007 Introductory remarks. Symposium: The world and the future of nonthermal technologies for processing foods. 2007 IFT Annual Meeting & Food Expo. Chicago July 28-August 1. (Moderator)
- July-Aug 2007 Research and implementation of nonthermal processing of foods in the Americas. Symposium: The world and the future of nonthermal technologies for processing foods. 2007 IFT Annual Meeting & Food Expo. Chicago July 28-August 1. (Moderator)
- July-Aug 2007 Introductory remarks. Symposium: Challenges and impact of food safety assurance in Latin America and the Caribbean, part 1: Food safety challenges and FBD surveillance. 2007 IFT Annual Meeting & Food Expo. Chicago July 28-August 1. (Moderator)
- July-Aug 2007 Introductory remarks. Symposium: The Challenges and impact of food safety assurance in Latin America and the Caribbean, part 2: Food safety implementation case studies. 2007 IFT Annual Meeting & Food Expo. Chicago July 28-August 1. (Moderator)

- July-Aug 2007 Pulsed electric fields on flavored milks: Physicochemical and microbiological changes. Nonthermal processing poster session. 2007 IFT Annual Meeting & Food Expo. Chicago July 28-August 1.
- June 2007 High pressure/thermal sterilization of pre-cooked scrambled egg patties. Poster presentation. 40th Anniversary Australian Institute of Food Science and Technology (AIFST) Convention. Melbourne, Australia.
- October 2006 Tecnologías emergentes para la conservación de los alimentos. XIV Seminario Latinamerican y del Caribe Sobre ciencia y Tecnología de los Alimentos, October 22-24, 2006. Session Moderator. Palacio de Convenciones de la Habana, Cuba.
- October 2006 Continuación Ingeniería y Tecnología de los Alimentos. XIV Seminario Latinamerican y del Caribe Sobre ciencia y Tecnología de los Alimentos, October 22-24, 2006. Session Chairman. Palacio de Convenciones de la Habana, Cuba.
- June 2006 Food Safety in Latin America: Its Impact on the Global Trade and Making food safety decisions when the science is incomplete. Moderator. IFT Annual Meeting. Orlando, FL.
- June 2006 Effect of high hydrostratic pressure in the processing of probiotic lowfat yogurt. Oral presentation. IFT Annual Meeting. Orlando, FL.
- June 2006 Inactivation of *Listeria innocua* in milk by high temperature short time (HST) and high temperature short time ultrasonic (HTST-U) treatments. Poster presentation. IFT Annual Meeting. Orlando, FL. June 2006.
- June 2006 UV light processing of fruit juices to inactivate *Saccharomyces cerevisiae*. Poster presentation. IFT Annual Meeting. Orlando, FL. June 2006.
- June 2006 Synergistic inactivation of *Escherichia coli* in apply cider by pulsed electric fields and selected antimicrobials. Poster presentation. IFT Annual Meeting. Orlando, FL. June 2006.

- June 2006 Mechanism of inactivation for thermo-sonicated *Listeria innocua* ATCC 51742 in whole milk using scanning and transmission electron microscopy. Poster presentation. IFT Annual Meeting. Orlando, FL. June 2006.
- June 2006 Microstructure of fat globules in whole milk after thermo-sonication treatment. Poster presentation. IFT Annual Meeting. Orlando, FL. June 2006.
- December 2005 Flowability in Food powders. Presentation. Conference at Catholic University. Montevideo, Uruguay.
- November 2005 High pressure thermal sterilization of precooked egg patties: factors affecting preheating efficiency. American Institute of Chemical Engineers Annual Meeting. Cincinnati, OH.
- November 2005 Undesirable phenomena encountered during food powder handling, processing, and storage. American Institute of Chemical Engineers Annual Meeting. Cincinnati, OH.
- October 2005 Scanning electron microscopy for thermoultrasonicated cells of *Listeria innocua*. Roundtable. CIBIA V Congreso Iberoamericano de Ingenieria de Alimentos. Puerto Vallarta, Mexico.
- September 2005 Thermal Sterilization of Foods. V Iberoamerican Congress on Food Engineering. Puerto Vallarta, Mexico.
- September 2005 Advances in Food Dehydration, Canning and Freezing. V Iberoamerican Congress on Food Engineering. 2nd International Symposium on Food Development and Innovation.
- July 2005 Consumer and trained panel evaluation of high pressure. Poster presentation. IFT Conference. New Orleans, LA. July 2005.
- July 2005. Approaches for texture and syneresis improvement in scrambled egg patties after high pressure thermal sterilization. IFT. New Orleans, LA.
- July 2005 Consumer and trained panel evaluation of high pressure. Poster session. IFT. New Orleans, LA.
- July 2004 Optimization of high pressure thermal sterilization conditions for formulated egg products. Poster session. IFT. Las Vegas, NV.

- July 2004 High pressure processing of egg-based products. IFT. Las Vegas, NV.
- July 2004 Relevant legislation in Asia. In: Global harmonization of legislation with respect to new products and processes. IFT. Las Vegas, NV.
- 2003 Quality factors & microbial flora evolution in fresh blended orange & carrot juice treated by pulsed electric fields (PEF). (Poster session). CSIC. Valencia, Spain.
- 2003 Pectin methyl Esterase & quality factors of fresh blended orange & carrot juice inactivated by pulsed electric fields (PEF). (Poster session). CSIC. Valencia, Spain.
- October 2003 Effect of high intensity pulsed electric fields on *Saccharomyces cerevisiae* suspended in orange juice. Poster session. 4th Congreso Iberoamericano de Ingeniería de Alimentos (CIBIA-IV). Valparaíso, Chile. 2003.
- September 2003 Inactivation of peroxidase in orange juice processed by high intensity pulsed electric fields. Workshop on nonthermal food preservation. Wageningen, Holland.
- July 2003 Quality factors and microbial flora evolution in fresh blended orange and carrot juice treated by Pulsed Electric Fields (PEF). Poster session. XII IUFOST (International Union of Food Science and Technology Congress), Chicago, IL.
- July 2003 High intensity pulsed electric field inactivation of pectin methyl esterase in orange juice. Poster session. XII IUFOST (International Union of Food Science and Technology Congress), Chicago, IL.
- July 2003 Textural and mass transfer properties of apple and potato slices exposed to pulsed electric fields. Annual Meeting of IFT. Chicago, IL.
- July 2003 Synergistic effect of the combination of pulsed electric fields and mild thermal treatments on the inactivation of *Listeria innocua* in whole milk. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Effect of pulse width, frequency and polarity of high intensity pulsed electric fields in a commercial pectic enzymes complex. Poster session. Annual Meeting of IFT. Chicago, IL.

- July 2003 Inactivation of *Lactobacillus brevis* in orange juice by high intensity pulsed electric fields. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 High hydrostatic pressure processing of mango puree containing antibrowning agents. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Combined effect of high hydrostatic pressure and thermal treatment on the inactivation kinetics of lipoxygenase activity in raw soymilk. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Come-up time as a process variable on high hydrostatic pressure inactivation of *Escherichia coli* in liquid whole milk: A kinetic interpretation. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Pectin methyl esterase and quality factors pulsed electric fields (PEF) inactivation in fresh blended orange and carrot juice. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Extension of milk shelf-life by a hurdle combination of pulsed electric fields and a mild thermal treatment. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Use of pulsed electric fields technology as a reprocessing alternative for fluid milk. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Microbial attachment to stainless steel surfaces: A comparative study between different finishes and a silver compound coating. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Viscoelastic properties of pressurized and heat-treated surimi gels made from Alaska pollock (*Theragra chalcogramma*) and Pacific whiting (*Merluccius productus*). Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Physical properties of pressurized and heat-treated surimi gels as affected by potato starch and egg white. Poster session. Annual Meeting of IFT. Chicago, IL.
- July 2003 Cheese making properties of high pressure processed milk: Pressure and holding time effects. Poster session. Annual Meeting of IFT. Chicago, IL.

- July 2003 High pressure-processed Mexican sauce. Annual Meeting of IFT. Chicago, IL.
- July 2003 Yield stress as predictor of firmness in yogurt. Annual Meeting of IFT. Chicago, IL.
- Nov 2003 Influence of Electric Current on the Effectiveness of Pulsed Electric Fields as a Food Preservation Process. Eighth Topical Conference on Food Engineering CoFE. San Francisco, CA.
- 2003 Expanding international marketing opportunities for pasteurized milk by developing a new processing strategy: The combination of pulsed electric fields and heat. IMPACT Center Annual meeting. Session III.
- Sept 2002 Actualidad y perspectivas de los métodos no térmicos para el procesado de alimentos. CESIA 2nd Congreso Espanol De Ingenieria de Alimentos. Universitat de Lleida, España.
- June 2002 Low-fat yogurt manufacture using high hydrostatic pressure and thermal processing. Annual Meeting of the Institute of Food Technologists. Anaheim, CA.
- June 2002 Thermal analysis of high-pressure processed starches of different amylose content. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Texture characterization of high-pressure processed starches with different amylose content. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Effect of polysaccharide and polysaccharide-fatty acid based on edible films on coated pear wedges during refrigeration storage. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Disrupting effect of high hydrostatic pressure on casein micelle isolates. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Friction of food powders: a new flowability index. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Friction in the Characterization of Food Powders Flowability. Institute of Food Technologists Conference. Anaheim, CA.

- June 2002 *Listeria innocua* inactivation kinetics in whole milk by high pressure. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 High hydrostatic pressure processing of peach puree with and without antibrowning agents. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Effect of combined pressure and temperature in soymilk trypsin inhibitors. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Cheddar cheese manufacturing using high pressure processed milk: A comparative study. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Reduction of protease activity in a simulated milk ultrafiltrate by high intensity pulsed electric fields. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Pulsed electric fields (PEF) inactivation kinetics of *E. coli* in fresh blended orange juice with different proportions of carrot juice. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Pulsed electric fields processing for the preservation of horchata beverage. Annual Meeting of the IFT. Anaheim, CA.
- June 2002 Pulsed electric fields and its induced heating inactivate *Listeria* spp. Annual Meeting of the IFT. Anaheim, CA.
- March 2002 New Technologies: The Latest in Detection, Sterilization, and More. Presented by *Food Safety* Magazine. Food Safety Summit and Expo. Washington DC.
- March 2002 Effects of pulsed electric fields on enzymes and other food components. Emerging Technologies for the Food Industry (EmerTec 2002). Madrid, Spain.
- March 2002 Reduction of protease activity in milk by high intensity pulsed electric fields. Emerging Technologies for the Food Industry (EmerTec 2002). Madrid, Spain.
- March 2002 Inactivation of a commercial pectic enzyme by high intensity pulsed electric fields. Emerging Technologies for the Food Industry (EmerTec 2002). Madrid, Spain.

- March 2002 Inactivation of a commercial pectic enzyme by high intensity pulsed electric fields. Emerging Technologies for the Food Industry (EmerTec 2002). Madrid, Spain.
- March 2002 Tecnologias Emergentes de Interes para la Industria Alimentaria. (EmerTec 2002). Madrid, Spain.
- December 2001 Inactivation kinetics of Enterobacter aerogenes by pulsed electric field: effect of growth stage. EUROCAFT 2001. Berlin, Germany.
- December 2001 Effects of high intensity pulsed electric fields on endopolygalacturonase activity in a commercial enzyme formulation. EUROCAFT 2001. Berlin, Germany.
- December 2001 Inactivation kinetics of a microbial lipase treated by high intensity pulsed electric fields. EUROCAFT 2001. Berlin, Germany.
- December 2001 Pulsed electric field inactivation of pectin methyl esterase in blended orange and carrot juice. EUROCAFT 2001. Berlin, Germany.
- December 2001 Kinetic analysis of Listeria innocua inactivation in whole milk by high pressure. EUROCAFT 2001. Berlin, Germany.
- November 2001 Development of a monitoring system for pulsed electric field processing units. CoFE, AIChE. Reno, NV.
- November 2001 Food powder technology: a review and update. CoFE, AIChE. Reno, NV.
- November 2001 Rheological characterization of food gels. CoFE, AIChE. Reno, NV.
- November 2001 Physical evaluation of high pressure processed starches of different amylose content. CoFE, AIChE. Reno, NV.
- November 2001 Dehydration of foods: a review and update. CoFE, AIChE. Reno, NV.
- November 2001 Evaluation of moisture change in apple cylinders treated by high hydrostatic pressure. CoFE, AIChE. Reno, NV.
- November 2001 Nonthermal food processing. CoFE, AIChE. Reno, NV.

- November 2001 Combined effects of high intensity pulsed electric fields and acidification on a lipase from *Pseudomonas fluorescens*. CoFE, AIChE. Reno, NV.
- October 2001 Non-thermal processing and food safety. XXI Congresso Brasileiro de Microbiologia. Foz do Iguacu PR, Brazil.
- March 2001 Nonthermal Food Processing. I Congreso Iberoamericano y las IX Jornadas Ecuatorianas de Ciencia y Tecnología de Alimentos. Quito, Ecuador.
- March 2001 Tecnologías Emergentes para el Procesamiento de Alimentos. I Congreso Iberoamericano y las IX Jornadas Ecuatorianas de Ciencia y Tecnología de Alimentos. Quito, Ecuador.
- July 2001 Nonthermal Food Processing. I Congreso Iberoamericano IX Jornadas Ecuatorianas de Ciencia y Tecnología de Alimentos. Quito, Ecuador.
- July 2001 Tecnologías Emergentes para el Procesamiento de Alimentos. Congreso Iberoamericano IX Jornadas Ecuatorianas de Ciencia y Tecnología de Alimentos. Quito, Ecuador.
- June 2001 Headspace, storage temperature and storage time affect sensory quality and acceptability of wet pack pears combat rations. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Novel processing technologies and packaging: Effects of ultra high pressure and pasteurizing doses of irradiation. IFT Annual meeting. New Orleans, LA.
- June 2001 Evaluation of the influence of headspace on the shelf life of retort pouch wet pack pears combat rations. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Shelf life study of retort pouch beef-containing combat rations packaged at selected headspaces. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Influence of the come-up-time as a process variable on the high hydrostatic pressure inactivation of *Listeria innocua* on whole milk. Annual Meeting of IFT. New Orleans, LA.

- June 2001 The combined effect of pulsed electric fields and conventional heating on the microbial quality and shelf life of skim milk. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Energy analysis of liquid whole egg pasteurization by pulsed electric field technology. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Use of mathematical simulations to evaluate the best location for high voltage and current sensors in pulsed electric field technology. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Inactivation of *Listeria innocua* and *Pseudomonas fluorescens* in skim milk: Some energy considerations. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Inactivation of *Pseudomonas fluorescens* in skim milk by combination of pulsed electric fields and organic acids. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Inactivation of *Listeria innocua* by combining pulsed electric fields and acetic acid in skim milk. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Effect of a 50 T pulsed magnetic field on *Escherichia coli*, *Saccharomyces cerevisiae*, *Bacillus subtilis* and *Listeria innocua*. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Development of automated monitoring system for pulsed electric field technology. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Effect of high intensity pulsed electric fields on a protease from *Bacillus subtilis*. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Combined effects of high intensity pulsed electric fields and mild heat on a lipase from *Pseudomonas fluorescens*. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Flow and viscoelastic properties of high hydrostatic pressure (HHP) avocado puree. Annual Meeting of IFT. New Orleans, LA.
- June 2001 Combined effect of headspace and temperature over the shelf life of retort pouch black bean and rice burrito combat rations. Annual Meeting of IFT. New Orleans, LA.

- June 2001 Microstructure of high hydrostatic pressure yogurt. Annual Meeting of IFT. New Orleans, LA.
- March 2001 Study of the inactivation of *Lactobacillus Plantarium* in mixed orange and carrot juice by means of pulsed electric fields: comparison of inactivation kinetic models. 3rd Iberoamerican Congress of Food Engineering. Valencia, Spain.
- March 2001 Combined effects of high intensity pulsed electric fields and heat or acidification on a protease from *Bacillus subtilis*. 3rd Iberoamerican Congress of Food Engineering. Valencia, Spain.
- March 2001 Effect of high pressure on cooking time and water inhibition of black beans. 3rd Iberoamerican Congress of Food Engineering. Valencia, Spain.
- March 2001 Modelling of the combined effect of pulsed electric fields and acidification in the inactivation of *Pseudomonas fluorescens* in milk. 3rd Iberoamerican Congress of Food Engineering. Valencia, Spain.
- March 2001 Modelling of the combined effect of pulsed electric fields and acidification in the inactivation of *Listeria innocua* in milk. 3rd Iberoamerican Congress of Food Engineering. Valencia, Spain.
- June 2000 High hydrostatic pressure treatment of black beans protein bodies. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Viscoelasticity by dynamics testing of surimi gels obtained by high hydrostatic pressure. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Rheological properties of yogurt processed by high hydrostatic pressure. Annual Meeting of the IFT. Dallas, TX.
- June 2000 The effect of padding materials on the compression characteristics of some agglomerated food powders. Annual Meeting of the IFT. Dallas, TX.
- June 2000 High hydrostatic pressure resistance of *Escherichia coli*, *Listeria innocua*, and *Enterococcus faecium*. Annual Meeting of the IFT. Dallas, TX.
- June 2000 The molten globule and functionality of beta-lactoglobulin induced by high hydrostatic. Annual Meeting of the IFT. Dallas, TX.

- June 2000 Effect of a high-intensity magnetic field on *Escherichia coli*. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Design of a monitoring system for pulsed electric field processing. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Pasteurization of skim milk with heat and pulsed electric fields. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Inactivation of microorganisms by pulsed electric fields. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Hurdle approach for the inactivation of *Micrococcus luteus*. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Comparison of an 18-Tesla static and pulsed magnetic field on the inactivation of *Saccharomyces cerevisiae*. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Inactivation effect of pulsed magnetic fields combined with other technologies on *Escherichia coli*. Annual Meeting of the IFT. Dallas, TX.
- June 2000 High hydrostatic pressure and the microstructure of asparagus. Annual Meeting of the IFT. Dallas, TX.
- June 2000 Combined effect of high hydrostatic pressure and water activity on *Escherichia coli* inhibition. Annual Meeting of the IFT. Dallas, TX.
- April 2000 Inactivation of polyphenoloxidase from pear and peach by pulsed electric fields. 8th International Congress on Engineering and Foods. Puebla, México.
- April 2000 Cheddar cheese quality as related to the use of pulsed electric fields to pasteurize milk. 8th International. Congress on Engineering and Food. Puebla, México.
- November 1999 Evaluation of the effect of PEF pasteurization on cheesemaking properties of raw milk. Poster session. Sixth Conference of Food Engineering (CoFE).
- November 1999 Influence of Product Properties on Food Freezing. CoFE, AIChE. Dallas, TX.

- November 1999 Inactivation of *Listeria innocua* and *Pseudomona fluorescens* in skim milk with pulsed electric fields. CoFE, AIChE. Dallas, TX.
- November 1999 Shelf-life Extension of Raw Skim Milk by Combined Heat and Pulsed Electric Fields (PEF). CoFE, AIChE. Dallas, TX.
- November 1999 Rheological Properties of Cheddar cheese from Milk treated with High Hydrostatic Pressure. CoFE, AIChE. Dallas, TX.
- November 1999 Quality Aspects of Apple Juice Influenced by Ultrafiltration Membrane Pore Size. CoFE, AIChE. Dallas, TX.
- November 1999 Milk Pasteurization by High Voltage Pulsed Electric Fields for Improving Cheddar cheese Quality. CoFE, AIChE. Dallas, TX.
- November 1999 Rheological Properties in Surimi Gels Obtained by High Hydrostatic Pressure. CoFE, AIChE. Dallas, TX.
- November 1999 Electrical properties of peach juice and milk. European Conference on Emerging Food Science and Technology. Tampere, Finland.
- November 1999 Inactivation of *Lactobacillus brevis* in peach juice by electrical pulses of high field intensity. European Conference on Emerging Food Science and Technology. Tampere, Finland.
- November 1999 Inhibition of peach polyphenol oxidase by pulsed electric fields. European Conference on Emerging Food Science and Technology. Tampere, Finland.
- November 1999 Inhibition of pear polyphenol oxidase by pulsed electric fields. European Conference on Emerging Food Science and Technology. Tampere, Finland.
- November 1999 Inactivation of *Saccharomyces cerevisiae* in a model solution of peach juice by electrical pulses of high field intensity. European Conference on Emerging Food Science and Technology. Tampere, Finland.
- July 1999 Inactivation of *Listeria innocua* in Liquid Whole Egg by Pulsed Electric Fields and Nisin. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Transmission Electron Microscopy of *Listeria innocua* Treated by Pulsed Electric Fields and nisin. Annual Meeting of the IFT. Chicago, IL.

- July 1999 Inhibition of Tomato (*Lycopersicon esculentum* mill) Pectin Methylesterase by Pulsed Electric Fields. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Hurdle Approach for the Inactivation of *Pseudomonas fluorescens* in Liquid Whole egg. Annual Meeting of the IFT. Chicago, IL.
- July 1999 High Hydrostatic Pressure and Carbon Dioxide Inactivation of *Saccharomyces cerevisiae* ssp. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Enzyme Activity, Natural Flora, and Sensory Acceptability of Oscillatory High Hydrostatic Pressure Treated Guacamole. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Nonthermal Inactivation of Endoproteases by Pulsed Electric Fields technology. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Measurement of Delivered Energy in Pulsed Electric Field Technology. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Inactivation of *Listeria innocua* in skim milk by Pulsed Electric Fields and nisin. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Hydrophobicity and Molten Globule state of high Pressure Treated Beta-Lactoglobulin. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Agglomerate Bulk Density Changes after Treatment in a High-Hydrostatic-Pressure Instrument: Effect of Pressure, Duration Time, Agglomerate Size, and Water Activity. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Textural Properties of Dry-Cured Ham. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Microbial Evolution and Color Changes during Storage of High Hydrostatic Pressure Treated Guacamole. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Effect of Extrusion Temperature and Screw on a Blend of Rice and Pigeonpea (*Cajanus cajan* (L) millsp) Flour. Annual Meeting of the IFT. Chicago, IL.
- July 1999 Microstructure of Black Bean Protein Bodies Treated with High Hydrostatic Pressure. Annual Meeting of the IFT. Chicago, IL.

- April 1999 Quality Aspects of Apple Juice Influenced by Ultrafiltration Membrane Pore Size. Annual Technical Conference & Expo of the AFS Boston, MA.
- September 1998 Inactivación de *Saccharomyces cerevisiae* en Zumo de Melocotón Mediante la Aplicación de Pulsos de Alta Intensidad de Campo Eléctrico. XI Congreso Nacional de Microbiología de los Alimentos. Pamplona, Spain.
- June 1998 Cooking Time and Water Absorption of Black Beans Treated with High Pressure. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Electrical Charge Distribution Surrounding Microorganisms Suspended in Foods Exposed to Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Heat Conduction in Microorganisms During Food Processing by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Engineering Aspects of the Continuous Treatment of Fluid Foods by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Dielectric Breakdown in a Non-Homogenous Food Processed by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Energy Analysis for Liquid Whole Egg Pasteurization Processed by Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Viscoelastic Characteristics of Pacific Whiting Surimi Gels Treated by High Hydrostatic Pressure. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Color Changes During Storage of High Hydrostatic Pressure Treated Avocado Puree. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 High Hydrostatic Pressure and Polypehnoloxidase Activity in Avocado Puree. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 High Hydrostatic Pressure Induced Structural Changes to *Neosartorya fischeri* Ascospores. Annual Meeting of the IFT. Atlanta, GA.

- June 1998 Polypehnoloxidase Activity and Color of Blanched and High Hydrostatic Pressure Treated Banana Puree. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Effect of pH and Water Activity on the Initiation of Germination and Inactivation of *Bacillus cereus* by High Hydrostatic Pressure. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Initiation of Germination and Inactivation by High Hydrostatic Pressure of *Bacillus cereus* Sporulated at Different Temperatures. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Heat, High Hydrostatic Pressure and High Intensity Pulsed Electric Field Inactivation of Ascospores and Vegetative Cells of *Zygosaccharomyces bailii* Suspended in Fruit Juices. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 High Intensity Pulsed Electric Field Inactivation of *Byssochlamys* spp. Suspended in Fruit Juices. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Pasteurization of Raw Skim Milk by High Intensity Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Resistant Microorganisms to High Intensity Pulsed Electric Field Pasteurization of Raw Skim Milk. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Hardness and Cohesiveness of High Hydrostatic Pressure Pacific Whiting Surimi Gels at Different Temperatures. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 The Role of Pressure and Time on the Asymptotic Modulus of Alaska Pollock and Pacific Whiting Surimi Gels. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Attrition Evaluation for Selected Agglomerated Food Powders: The Effect of Agglomerate Size and Water Activity. Annual Meeting of the IFT. Atlanta, GA.
- June 1998 Compression Characteristics of Selected Food Powder Mixtures: The Effect of Particle Size, Mixture Composition, and Compression Cell Geometry. Annual Meeting of the IFT. Atlanta, GA.

- November 1997 Characterization and Functionality of Food Powders. CoFE, AIChE. Los Angeles, CA.
- November 1997 A Comparison of Continuous and Pulsed High Hydrostatic Pressure Treatments for *Zygosaccharomyces bailii* Inactivation. CoFE, AIChE. Los Angeles, CA.
- November 1997 Inactivation of *E. coli* in Liquid Whole Eggs Using Pulsed Electric Field Technology. CoFE, AIChE. Los Angeles, CA.
- November 1997 Non-thermal Food Preservation Processes: Membrane Ultrafiltration and Pulsed Electric Fields Technology. CoFE, AIChE. Los Angeles, CA.
- November 1997 A Packaging and Shelf Life Study of Apple Slices Preserved by Combined Methods. Proceedings of the Fifth CoFE, AIChE. Los Angeles, CA.
- November 1997 Textural Properties of High Hydrostatic Pressure and Heat Formed Surimi Gels. CoFE, AIChE. Los Angeles, CA.
- November 1997 Water Activity in Minimal Processing and its Relation to Microbial Growth. CoFE, AIChE. Los Angeles, CA.
- June 1997 Browning of Apple Slices Treated with Polysaccharide Films. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Effect of Polysaccharide Film on Ethylene Production and Enzymatic Browning of Apple Slices. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Quality Changes During Refrigerated Storage of Packaged Apple Slices Treated with Polysaccharide Films. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Polygalacturonase Inactivation by High Hydrostatic Pressure. Annual Meeting of the IFT. Orlando, FL.
- June 1997 A Comparison Study of Pulsed Electric Fields, High Hydrostatic Pressure, and Thermal Processing on the Electrophoretic Patterns of Liquid Whole Eggs. Annual Meeting of IFT. Orlando, FL.

- June 1997 Escherichia coli Inactivation in Liquid Whole Eggs by Pulsed Electric Fields. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Inactivation of Bacillus subtilis Spores Using High Intensity Pulsed Electric Field in Combination with Other Food Preservation Technologies. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Effect of Pulsed High Hydrostatic Treatments on *Byssochlamys nivea* Ascospores Suspended in Fruit Juice Concentrates. Annual Meeting of the IFT. Orlando, FL.
- June 1997 High Hydrostatic Pressure Induced Structural Changes to *Zygosaccharomyces bailii*. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Effect of High Hydrostatic Pressure Treatment on *Saccharomyces cerevisiae* Viability. Annual Meeting of IFT. Orlando, FL.
- June 1997 Inactivating Microorganisms Using a Pulsed Electric Field Continuous Treatment System. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Microstructural Changes of Black Beans (*Phaseolus vulgaris L.*) Treated with High Pressure. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Pulsed Electric Field Inactivation of Foodborne Pathogens. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Flow and Structural Characteristics of Concentrated Milk. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Rheological and Structural Characteristics of High Hydrostatic Pressure Concentrated Milk. Annual Meeting of the Institute of the IFT. Orlando, FL.
- June 1997 Scanning Electron Microscopy Observations of Agglomerated Milk Powders Before and After Compression Testing. Annual Meeting of the IFT. Orlando, FL.
- June 1997 Inactivation of apple polyphenol oxidase by high intensity pulsed electric fields. Annual Meeting of the IFT. Orlando, FL.

- April 1997 Nonthermal Food Preservation by Pulsed Electric Fields. Seventh International Congress on Engineering and Food (ICEF 7). London, UK.
- April 1997 Effect of Pulsed Electric Fields on Proteins: Plasmin, an Extracellular Protease from *Pseudomonas fluorescens* M3/6, and Casein. ICEF 7. London, UK.
- April 1997 High Hydrostatic Pressure Inactivation Kinetics of *Zygosaccharomyces bailii*. ICEF 7. London, UK.
- April 1997 Rheological Characterization of Concentrated Milk at Various Temperatures and Concentrations. ICEF7. London, UK.
- April 1997 Rheological Characterization of Xanthan and Gellan Gels by Dynamic Tests. ICEF 7. London, UK.
- October 1996 Food Processing by High Voltage Pulsed Electric Field. Seventh Mediterranean Congress of Chemical Engineering. Barcelona, Spain.
- October 1996 Textural Properties of Egg Gels Formed under High Hydrostatic Pressure. Seventh Mediterranean Congress of Chemical Engineering. Barcelona, Spain.
- October 1996 Treatment of Peach Juice by High Voltage Pulsed Electric Field. Seventh Mediterranean Congress of Chemical Engineering. Barcelona, Spain.
- July 1996 The Rheology of Concentrated Milk as a Function of Concentration, Temperature, and Storage Time. Fifth World Congress of Chemical Engineering. San Diego, CA.
- July 1996 Rheology of Concentrated Milk: Effect of Solids Content, Temperature and Storage Time. Annual Meeting of the American Dairy Science Association. Corvallis, OR.
- July 1996 Effects of Pulsed Electric Fields on Two Proteins: An Extracellular Protease from *Pseudomonas fluorescens* M3/6 and Casein. Annual Meeting of the American Dairy Science Association. Corvallis, OR.
- June 1996 Compression Characteristics of Selected Agglomerated Food Powders. Annual Meeting of the IFT. New Orleans, LA.

- June 1996 Size Characterization of Selected Food Powders by Five Particle Size Distribution Functions. Annual Meeting of IFT. New Orleans, LA.
- June 1996 Packaging and Shelf Life Study of Apple Slices Preserved by Combined Methods. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Inactivation of *Bacillus subtilis* and *Escherichia coli* Suspended in Pea Soup by High Intensity Pulsed Electric Fields. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Pulsed Electric Fields Inactivation of *Escherichia coli* Suspended Skim Milk. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Effect of High Intensity Pulsed Electric Fields on the Inactivation of *Escherichia coli* in Liquid Egg. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Rheological Characteristics of Xanthan Gum in the Presence of Ferric Ions. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Rheological Description of Full-Fat and Low-Fat Cheddar Cheese Made with Fat Mimetics. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Interactions Between Beef Plasma and Starch on the Rheological Properties of Pacific Whiting Surimi Gels. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Setting and Protease Inhibitors on the Texture of Pacific Whiting Surimi Gels. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Viscoelastic Properties of Xanthan Gels Interacting with Electrolytes. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Inhibition of Polyphenoloxidase in Apple Slices During High Hydrostatic Pressure Treatments. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Browning of Apple Slices Processed by High Hydrostatic Pressure. Annual Meeting of the IFT. New Orleans, LA.

- June 1996 Viscoelastic Properties of Egg Gels Formed Under High Hydrostatic Pressure. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Flow Properties of Concentrated Milk: Effect of Temperature, Concentration and Storage Time. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 High Hydrostatic Pressure as a Hurdle for *Zygosaccharomyces bailii* Inhibition. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Combined Effect of High Hydrostatic Pressure and Water Activity on *Zygosaccharomyces bailii* Inhibition. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Pulsed Electric Field Induced Structural Changes to *Saccharomyces cerevisiae*. Annual Meeting of the IFT. New Orleans, LA.
- June 1996 Functionality of Minimally Processed Coated Apple Slices. Annual Meeting of the IFT. New Orleans, LA.
- March 1996 Effect of the Extrusion Processing Conditions on Flour Mixes. First Venezuelan Congress on Food Science and Technology. Food Science and Technology Institute, Caracas, Venezuela.
- March 1996 High Hydrostatic Pressure as a Preservation Factor to Inhibit *Zygosaccharomyces bailii* by Combined Methods Technology. First Venezuelan Congress on Food Science and Technology. Food Science and Technology Institute, Caracas, Venezuela.
- November 1995 Rheological Characterization of Cheese-Whey Gels. First Iberoamerican Congress of Food Engineering. Campinas, Brazil.
- November 1995 Effect of Edible Films on Enzymatic Browning on Apple Slices. First Iberoamerican Congress of Food Engineering. Campinas, Brazil.
- November 1995 Electron Microscopy Study of *Saccharomyces cerevisiae* Treated in High Voltage Pulsed Electric Fields. CoFE, AIChE. Chicago, IL.
- November 1995 HACCP and HAZOP on a Pulsed Electric Fields Processing Operation. CoFE, AIChE. Chicago, IL.

- November 1995 Inactivation of *Escherichia coli* in Green Pea Soup Using Pulsed Electric Fields. CoFE, AIChE. Chicago, IL.
- November 1995 Rheological Characterization of Gellan Gum by Dynamic Shear and Creep. CoFE, AIChE. Chicago, IL.
- November 1995 Stability of Dehydrated Comminuted Orange Juice, Influence of Moisture Level and Storage Temperature. CoFE, AIChE. Chicago, IL.
- November 1995 Prediction of Stability of Dehydrated Apple as a Function of Water Activity and Glass Transition Temperature. CoFE, AIChE. Chicago, IL.
- October 1995 A Continuous Treatment System for Inactivating Microorganisms with Pulsed Electric Fields. Annual Meeting of the Institute of Electrical and Electronic Engineers, Industry Applications Society. Orlando, FL.
- August 1995 Osmotic Dehydration of Apples. International Conference on Food Science and Technology, Fine Particle Society. Chicago, IL.
- August 1995 Characterization of the Attrition Process in Agglomerated Food Powders. International Conference on Food Science and Technology, Fine Particle Society, Chicago, IL.
- August 1995 Nonthermal Processing of Foods. Ninth World Congress of Food Science and Technology. Budapest, Hungary (paper was not read).
- August 1995 Oscillating Magnetic Field Stabilization of Foods. Annual Meeting of the IAMFES. Philadelphia, PA.
- June 1995 Pulse Waveshapes and Microbial Inactivation Using High Voltage Pulsed Electric Fields. Annual Meeting of the IFT. Anaheim, CA
- June 1995 Nonthermal Inactivation of *S. Cerevisiae* in Apple Juice Using Pulsed Electric Fields. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Electron Microscope Studies of *E. coli* and *S. aureus* Subjected to High Voltage Pulsed Electric Fields. Annual Meeting of the IFT, Anaheim, CA.

- June 1995 Rheological Characterization of Evaporated Milk at Different Concentrations and Temperatures. Annual Meeting of the IFT. Anaheim, CA
- June 1995 The Combined Inhibitory Effect of Lysozyme and High Voltage Pulsed Electric Fields on the Growth of *Bacillus Subtilis* Spores. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Viscoelastic Properties of Reduced Fat and Full-Fat Cheddar Cheese. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Rheological Properties of Food Gums: Effects of Concentration and Temperature. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Rheological Properties of Surimi Gels: Effects of Setting and Addition of Corn Starch. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Inactivation of a Protease from *Pseudomonas fluorescens* M3/6 Using High Voltage Pulsed Electric Fields. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Inactivation of *Escherichia coli* Using Combined Nonthermal Methods: pH, Ionic Strength and High Voltage Pulsed Electric Fields. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Enzymatic Browning of New Apple Cultivars and Inhibition by 4-Hexylresorcinol Based Formulations. Annual Meeting of the IFT. Anaheim, CA.
- June 1995 Effect of the Extrusion Conditions on Some Functional and Nutritional Properties of 'Pinto' Bean Meal (*Phaseolus vulgaris* L.). Annual Meeting of the IFT. Anaheim, CA.
- December 1994 Nonthermal Food Pasteurization Using High Voltage Pulsed Electric Fields. ASAE International Winter Meeting, Atlanta, GA.
- December 1994 Pulsed Electric Field Treatment Chamber Design Using a Finite Element Method. ASAE International Winter Meeting. Atlanta, GA.
- October 1994 Preservation of Foods by Pulsed Electric Fields. R & D Associates Meeting, Boston, MA.

- August 1994 Inhibition of Browning of Fresh Apple Slices by 4-Hexylresorcinol. Symposium on Enzymatic Browning and Its Prevention in Foods, American Chemical Society. Washington, DC.
- June 1994 Effect of High Voltage Pulsed Electric Fields on Plasmin. Annual Meeting of the IFT. Atlanta, GA.
- June 1994 Predicting Viscoelastic Properties of Food Gum Dispersions Using a Fractional Derivative Model. Annual Meeting of the IFT. Atlanta, GA.
- June 1994 Temperature Dependence on the Inactivation of *E. coli* by High Voltage Pulsed Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1994 Protein Denaturation by Strong Electric Fields. Annual Meeting of the IFT. Atlanta, GA.
- June 1994 Prediction of Water Activity in Multicomponent Foods. ISOPOW Practicum II. Puebla, México.
- June 1994 Apple Preservation by Combined Methods. International Symposium on Properties of Water, Puebla, México.
- May 1994 Pulsed Electric Field Pasteurization of Foods with a Coaxial Treatment Chamber. Canadian Institute of Food Science and Technology Annual Meeting. Vancouver, British Columbia, Canada.
- May 1994 Growth Stage and Temperature Affect the Inactivation of *E. coli* by Pulsed Electric Fields. Canadian Institute of Food Science and Technology Annual Meeting. Vancouver, British Columbia, Canada.
- May 1994 Rheological Characteristics of Milkfat and Milkfat Blend Sucrose Polyesters. Canadian Institute of Food Science and Technology Annual Meeting. Vancouver, British Columbia, Canada.
- May 1994 A Computer Program to Predict Water Activity in Multicomponent Foods. Canadian Institute of Food Science and Technology Annual Meeting. Vancouver, British Columbia, Canada.

- May 1994 Production of Surimi from Carp and Pink Salmon. Canadian Institute of Food Science and Technology Annual Meeting. Vancouver, British Columbia, Canada.
- October 1993 Food Preservation by Pulsed Electric Fields. Food Preservation 2000. US Army Natick Research, Development and Engineering Center, Natick, MA.
- August 1993 Food Preservation by Pulsed Electric Fields. Summer Meeting of the AIChE. San Louis, MO.
- July 1993 Characteristics of Surimi Prepared from Carp and Pink Salmon. Annual Meeting of the IFT. Chicago, IL.
- July 1993 Inactivation of Microorganisms in Liquid Foods by Pulsed Electric Fields. Annual Meeting of the IFT. Chicago, IL.
- July 1993 Pulsed Electric Field Inactivation of Alkaline Phosphatase. Annual Meeting of the IFT. Chicago, IL.
- July 1993 Rheology and Microstructure of β -Lactoglobulin/Sodium Polypectate Gels. Annual Meeting of the IFT. Chicago, IL.
- July 1993 Slip Velocity and Yield Stress of Mayonnaise as a Function of Oil and Xanthan Concentration. Annual Meeting of the IFT. Chicago, IL.
- May 1993 Textural and Structural Changes in Apples Processed by Combined Methods. Food Structure Annual Meeting, Los Angeles, CA.
- March 1993 Attrition Kinetics in Tapped Agglomerated Food Powders. Second Latin American Congress on Food Science and Technology. México City, México.
- February 1993 Controlled Release in Foods. CoFE, AIChE. Chicago, IL.
- November 1992 Attrition Assessment in Agglomerated Food Powders. International Food Technology Exposition and Conference (IFTEC). The Hague, The Netherlands.
- November 1992 Rheological Characterization of Mayonnaise at Different Oil and Xanthan Concentrations. International Food Technology Exposition and Conference. The Hague, The Netherlands.

- November 1992 Textural Structural and Mass Transfer Studies of Apples Processed Using the Combined Method Approach. Fifth International Symposium on Properties of Water. Peñíscola, Spain.
- August 1992 Rheological Properties of Food Gums. CoFE, AIChE National Meeting. Minneapolis, MN.
- June 1992 Compaction Characteristics of Agglomerated Food Powders. Annual Meeting of the IFT. New Orleans, LA.
- June 1992 Textural Changes during Dehydration of Apple Slices by Combined Methods. Annual Meeting of the IFT. New Orleans, LA.
- June 1991 In Vitro Degradation and Solute Release from Erodible Polyanhydride Supports.ACHEMA '91, International Meeting on Chemical Engineering and Biotechnology. Frankfurt am Main, Germany
- June 1991 Prediction of Water Activity in Multicomponent Foods by an Interactive Computer Program. Annual Meeting of the IFT. Dallas, TX.
- March 1991 CYTED-D, AHI: A Multinational Project on Intermediate Moisture Foods. CoFE, AIChE. Chicago, IL.
- March 1991 Attrition in Agglomerated Coffee. CoFE, AIChE. Chicago, IL.
- November 1990 Mechanical Characterization of Polymers Useful in Controlled Drug Release Applications. Annual Meeting of the AIChE. Chicago, IL.
- November 1990 The Use of Polydiethylglycino-Phosphazene and Polydiphenoxyphosphazene as Biodegradable Polymers in Controlled Release Systems. Annual Meeting of the AIChE, Chicago, IL.
- August 1990 Mechanical Characterization of Polymers Useful in Controlled Drug Release Applications. First World Congress of Biomechanics. La Jolla, CA.
- June 1990 Characterization of the Attrition Process in Agglomerated Coffee by Natural Fractals. Annual Meeting of the IFT. Anaheim, CA. (This paper had a press release at the time of the presentation)

- September 1989 Characterization of Erodible Polymers Useful in Controlled Drug Release Applications. Universidad de Los Andes, Mérida, Venezuela.
- May 1989 Modeling of the Sorption Kinetics and the Browning Reaction of Freeze-Dried Pineapple Pulp. Fifth International Congress on Engineering and Food. Cologne, Germany.
- November 1988 Rheological Characterization of Semi-Liquid Food Products. Annual Meeting of the AIChE. Washington, DC.
- October 1988 Mechanical Tests on Polyphosphazenes Polymers Useful in Controlled Release Applications. Annual Meeting of the American Association of Pharmaceutical Scientists. Orlando, FL.
- August 1988 Polyphosphazenes as Physical Supports for Controlled Drug Release. Annual Meeting of the Controlled Release Society. Basel, Switzerland.
- June 1988 Modeling of Compaction by Tapping in Agglomerated Coffee. Annual Meeting of the IFT. New Orleans, LA.
- June 1988 Stability and Moisture Sorption Kinetics of Freeze-Dried Pineapple Pulp. Annual Meeting of the IFT. New Orleans, LA.
- June 1988 Polyphosphazenes as Physical Supports for Controlled Drug Release.ACHEMA '88, International Meeting on Chemical Engineering and Biotechnology. Frankfurt am Main, Germany.
- May 1988 Particle Segregation in Food Powder Binary Mixtures. Powder and Bulk Solids Conference. Chicago, IL.
- March 1988 Continuous Gravity Thickening. Annual Meeting of the AFS, Ocean City, MD.
- November 1987 Attrition of Instant Coffee by Tapping. Annual Meeting of the AIChE. NY.
- March 1987 Bulk Properties of Selected Food Powders Mixtures. World Congress of Food Technology II. Barcelona, Spain.
- June 1986 Density and Compressibility of Selected Food Ingredients Mixtures. Annual Meeting of the IFT. Dallas, TX.

- December 1985 Flow Parameters of Fluid Foods. 11th Interamerican Congress of Chemical Engineering. San Juan, PR.
- December 1985 Segregation in Food Powders. 11th Interamerican Congress of Chemical Engineering. San Juan, PR.
- July 1985 Determination of the Flow Parameters of Fluid Foods Using a Digitizer and a Personal Computer. Fourth International Congress on Engineering and Food. Edmonton, Alberta, Canada.
- March 1985 Kinetic Models for the Attrition of Instant Coffee. Sixth Annual Meeting of the Fine Particle Society. Miami, FL.
- November 1984 Segregation in Food Powders. Annual Meeting of the AIChE. San Francisco, CA.
- June 1984 Microstructure of Selected Binary Food Powder Mixtures. Annual Meeting of IFT. Anaheim, CA.
- November 1982 Flow Properties in Semiliquid Foods. Food Engineering Department, University of Massachusetts, Amherst.

h) Scientific Interviews

Daniel, Alice. 2002. Natural Borne Killers. G.V. Barbosa-Cánovas and others interviewed. Prism 12 (2): 32-33.

i) Scientific Recognition

Néstor, M.V. and E. Galibert, eds. 2004. Sociedad Internacional de Ingenieros en Alimentos (ISFE). La Alimentacion Latinoamericana (253) 46-47.

UNPUBLISHED WORK

Maltary Plant Design. University of Massachusetts, Amherst (December 1983).

Use of Alternating Directions to Aquifer Simulation Systems. Technion, Israel Institute of Technology, Haifa, Israel (April 1980).

Predicting Model for the Galilean Sea Level. Technion, Israel Institute of Technology, Haifa, Israel (April 1980).

Capture and Processing of Tuna. School of Engineering, University of Uruguay, Montevideo, Uruguay (March 1977).

FUNDED RESEARCH PROJECTS

Principal Investigator

Production of extended-shelf-life milk and flavored milk products by PEF-enhanced thermal pasteurization. U.S. Army Natick Soldier Systems Center, \$296,052 (2 years)

Shelf-life extension of pasteurized milk by pulsed electric fields and mild thermal treatments. Washington Dairy Products Commission, \$89,701 (2 years)

Expanding international marketing opportunities for pasteurized milk by developing a new processing strategy: the combination of pulsed electric fields and heat. International Marketing Program for Agricultural Commodities & Trade, \$65,170 (2 years)

Food and Agricultural Sciences National Needs Graduate Fellowship Grants Program. Cooperative State Research, Education, and Extension Service (CSREES/USDA). \$300,000 (August 16, 2002–August 15, 2005).

Comparison of the efficiency of UV-Light, HHP and PEF for the inactivation of enzymes and microorganisms in grape juice. Universidad de Lleida España. 1999-2003.

Preservation of liquid foods by pulsed electric fields in combination with mild thermal treatments. Washington Technology Center. 1999-2003.

Microbial load reduction by pulsed electric fields applied on process water used in the production of frozen French fries. LambWeston Inc. 1999-2003.

Scale-up and commercial application of a PEF system for processing of liquid milk. Avista Utilities, Inland Northwest Dairies. 1999-2003.

Effect of high hydrostatic pressure on the mechanical and physical characteristics of packaging films. National Food Processors Association. 1999-2003.

Development of additive-free low fat yogurt employing High Hydrostatic Pressure. International Marketing Program for Agricultural Commodities & Trade. 1999-2003.

- Identification and verification of specifications applied to meals ready to eat (MRE).
Part I: Verification of headspace requirements. DoD. Combat Rations Network.
1999-2003.
- Low Fat Yogurt by High Hydrostatic Pressure. Impact Center, \$30,000 (November
2001-December 2003).
- Cheese Processing by High Hydrostatic Pressure. Dairy Management, Inc., \$46,000
(November 2001-December 2003).
- Combat Ration Network (CORANET), Defense Logistics Agency, Philadelphia, PA,
\$15,000 (November 1, 2001–October 30, 2002).
- Milk Processing by Pulsed Electric Fields. Washington Technology Center, \$200,000
(December 2000-December 2002).
- Low Fat Yogurt by High Hydrostatic Pressure. Impact Center, \$25,000 (November
2000-December 2002).
- Edible Films for Fruit Processing. Impact Center, \$38,000 (November 2000-December
2002).
- Cheese Processing by High Hydrostatic Pressure. Dairy Management, Inc., \$48,000
(November 2000-December 2002).
- Nonthermal Processing of Milk using Pulsed Electric Fields. Avista Utilities, \$175,000
(January 1, 2000–December 31, 2002).
- Cheese Manufacturing by High Hydrostatic Pressure. DMI Dairy management Inc.,
\$34,000 (January 2000–December 2000).
- Food and Agricultural Sciences National Needs Graduate Fellowship Grants Program.
Cooperative State Research, Education, and Extension Service (CSREES/USDA),
\$276,000 (August 16, 2000–August 15, 2003).
- Implementation of Biodegradable Films Coating Selected Fruits. IMPACT Center,
Washington State University, \$34,730 (January 2000–December 2000).
- 1999 Conference of Food Engineering (CoFE'99). National Science Foundation (NFS),
\$7,500 (June 1999–December 1999).
- Improved Quality Specifications in Meals-Ready-to-Eat (MRE). Combat Ration Network
(CORANET), Defense Logistics Agency, Philadelphia, PA, \$281,678 (May 1,
1999–April 30, 2000).

- High Pressure Food Processing-Part V. IMPACT Center, Washington State University, \$30,000 (January 1, 1999–December 31, 2000).
- Milk Pasteurization by Pulsed Electric Fields and High Pressure. Electrical Power-Research Institute (EPRI), Palo Alto, CA, \$120,000 (January 1, 1999–December 31, 2000).
- Preservation of Foods by Pulsed Electric Fields. IMPACT Center, Washington State University, \$32,000 (January 1, 1999–December 31, 1999).
- High Pressure Food Processing-Part IV. IMPACT Center, Washington State University, \$20,000 (January 1, 1998–March 31, 1999).
- Apple Juice Pasteurization by Pulsed Electric Fields-Part III. IMPACT Center, Washington State University, \$30,000 (January 1, 1998–December 31, 1999).
- Preservation of Foods by Oscillating Magnetic Fields. Unilever Research Laboratorium, Vlaarding, The Netherlands, \$100,000 (January 1, 1998–December 31, 1999).
- 1997 Conference of Food Engineering (CoFE'97). National Science Foundation (NFS), \$7,500 (June 1997–December 1997).
- Apple Juice Pasteurization by Pulsed Electric Fields-Part II. IMPACT Center, Washington State University, \$30,000 (January 1, 1997–December 31, 1997).
- Combat Rations Network. CORANET, Defense Logistics Agency, Philadelphia, PA, \$90,000 (June 1996–December 2000).
- Extending the Shelf-life of Asparagus by High Hydrostatic Pressure. Asparagus Commission, State of Washington, \$6,500 (June 1996–December 2000).
- Apple Juice Pasteurization by Pulsed Electric Fields. IMPACT Center, Washington State University, \$30,000 (January 1, 1996–December 31, 1996).
- High Pressure Food Processing-Part III. IMPACT Center, Washington State University, \$30,000 (April 1996–March 1997).
- Prevention of Browning in Apples-Part II. Washington Apple Commission, \$70,000 (January 1996–December 1996).
- Preservation of Foods by Nonthermal Processes. Electrical Power Research Institute (EPRI)/Bonneville Power Administration (BPA), \$160,000 (October 1995–September 1998).

- Prevention of Browning in Apples. Washington Apple Commission, \$51,138 (January 1995–December 1995).
- High Pressure Food Processing-Part II. IMPACT Center, Washington State University, \$42,341 (April 1995–March 1996).
- High Pressure Food Processing. Department of Energy, BPA, \$79,353 (October 1994–September 1997).
- Center for Nonthermal Processing of Foods. Department of Energy, BPA, \$106,725 (October 1994–September 1997).
- Electromagnetic Modeling and Protein Aggregation in Cell Membranes Treated in Pulsed High Voltage Electric Fields. Department of the Army, AASERT Program, \$80,000 (July 1994–June 1997).
- Establishment of Industrial Guidelines for the Production of Surimi and Kamaboko from Carp and Pink Salmon. IMPACT Center, Washington State University, \$30,372 (April 1994–March 1995).
- High Pressure Food Processing. IMPACT Center, Washington State University, \$30,000 (April 1994–March 1995).
- Integrated Product, Process and Package Development (I3PD) in the Food Industry. USDA-Higher Education Challenge Grants Program \$16,879 (WSU Component), In cooperation with Oregon State University (leading Institution) and Utah State University.
- Course Development: Engineering Properties of Biological Materials. USDA-Higher Education Challenge Grants Program \$13,206 (WSU Component), In cooperation with Purdue University (leading Institution) and North Carolina State University.
- Surimi and Kamaboko from Carp and Pink Salmon-Part II. IMPACT Center, Washington State University, \$15,000 (April 1993–March 1994).
- Enzyme Inactivation and Chemical Changes Induced in Foods by Pulsed Electric Field Treatment. Department of the Army, AASERT Program, \$112,629 (May 1993–May 1996).
- Stabilization of Combat Rations by Pulsed Electric Fields. US Army Natick, \$998,385 (October 1992–March 1995).

- Fresh-Like Fruit Products by Combining Preservation Techniques-Part III. IMPACT Center, Washington State University, \$7,000 (April 1993–March 1994).
- Latin American Interest Group Seminar Series. International Programs Office, Washington State University, \$1,000 (October 1992–September 1993).
- Surimi and Kamaboko from Carp and Pink Salmon. IMPACT Center, Washington State University, \$11,000 (April 1992–March 1993).
- US-Spain Research Cooperative Program. International Program Development Office, Washington State University, \$12,000 (January 1992–December 1992).
- Sterilization of Foods by Electric Pulses and Oscillating Magnetic Fields. Department of Energy, BPA, \$150,676 (April 1992–March 1995).
- Rheological Characterization of Food Gums. Grant-in-Aid Program, Washington State University, \$13,000 (July 1992–June 1993).
- Functional Properties of Surimi from Tilapia and Sardines-Part II. Ministry for Education and Science, Spain, 8,600,000 pesetas and \$2,500 (January-July 1991).
- Pasteurization and Sterilization of Foods by Pulsed Electric Fields and Oscillating Magnetic Fields. Nalley's Fine Foods, \$5,800 (January 1991–December 1992).
- Fresh-Like Fruit Products by Combining Preservation Techniques-Part II. IMPACT Center, Washington State University, \$25,000 (April 1992–March 1993).
- Fresh-Like Fruit Products by Combining Preservation Techniques. IMPACT Center, Washington State University, \$21,980 (April 1991–March 1992).
- Compaction Characteristics of Agglomerated Food Powders by Tapping. College of Agriculture and Home Economics, Washington State University, \$6,900 (October 1990–September 1991).
- Mechanical Properties of Several Polymers Useful in Controlled Release Applications. University-Industry Research Center in Pharmaceutical/Chemical Sciences of Puerto Rico, \$43,560 (September 1988–August 1989).
- Study of Attrition by Fractals. College of Engineering, University of Puerto Rico, \$2,750 (February 1988–January 1989).
- Morphology of Food Powders-Part II. College of Engineering, University of Puerto Rico, \$2,500 (February 1987–January 1988).

Morphology of Food Powders. College of Engineering, University of Puerto Rico, \$2,020 (February 1986–January 1987).

Continuous Gravity Thickening-Part II. College of Engineering, University of Puerto Rico, \$18,200 (March 1988–February 1989).

Continuous Gravity Thickening. College of Engineering, University of Puerto Rico, \$5,340 (February 1987–January 1988).

Intermediate Moisture Foods. CYTED-D and University of Puerto Rico, \$25,000 (January–December 1989).

Functional Properties of Surimi from Tilapia and Sardines. Ministry for Education and Science, Spain, 6,000,000 pesetas and \$2,600 (January–June 1990).

Surimi as an Intermediate Moisture Food. University of Puerto Rico-CYTED-D, \$15,000 (August 1987–July 1990).

Minced Fish from Tilapia. UPR-Sea Grant, \$2,000 (August 1986–July 1987).

Osmotic Dehydration of Pineapple. Land Authority of Puerto Rico, \$24,500 (October 1988–September 1989).

Bromelain Extraction from Pineapple. Land Authority of Puerto Rico, \$6,200 (March–August 1990).

Optimization in Pineapple Processing-Part II. Land Authority of Puerto Rico, \$24,500 (August 1987–July 1988).

Optimization in Pineapple Processing. Land Authority of Puerto Rico, \$23,000 (August 1986–July 1987).

Coffee Drying by Microwaves. Department of Agriculture of Puerto Rico, \$97,460 (approved, but not funded).

Co-Principal Investigator

Processing of carrot/orange juice and soybean milk by pulsed electric fields. European Union, FEDER Program, \$750,000 (March 1999–February 2002).

Measurement and Control of IMPACT Sensitivity in Fruits and Vegetables. USDA-NRICGP, \$100,000 (September 1995–August 1997).

Preservation of Food by Pulsed Electric Fields. CYCIT (Comisión Interministerial de Ciencia y Tecnología), Spain, \$120,000 (September 1995–August 1997).

Measurement and Control of IMPACT Damage Resistance in Fruits and Vegetables. USDA-NRICGP, \$85,000 (September 1993–August 1995).

Polyphosphazenes as Physical Supports for Controlled Drug Release-Part II. NSF EPSCoR, \$15,000 (October 1990–September 1991).

Polyphosphazenes as Physical Supports for Controlled Drug Release. NSF EPSCoR, \$185,000 (October 1986–September 1990).

Polyphosphazenes as Physical Supports for Controlled Drug Release. NIH, \$233,002 (approved, but not funded).

FURTHER STUDIES

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|--------------|---|
| March 1994 | Course: Preservation of Fruits by Combined Methods. Valencia Polytechnic University, Valencia, Spain. |
| January 1994 | Workshop: [M] Course Workshop. Washington State University, Pullman. |
| January 1993 | Workshop: Faculty Development. Washington State University, Pullman. |
| January 1992 | Workshop: Quality in Teaching and Research. Washington State University, Pullman. |
| June 1991 | IFT-IUFoST Basic Symposium: Physical Chemistry of Foods. Dallas, TX. |
| May 1991 | Workshop: Writing Across the Curriculum. Washington State University, Pullman. |
| June 1989 | IFT-IUFoST Basic Symposium: Advances in Bio- and Food Process Engineering. Chicago, IL. |
| August 1988 | Gordon Research Conference: Drug Carriers in Medicine and Biology. Plymouth, NH. |
| June 1988 | Course: Seafood Technology. IFT, New Orleans, LA. |

- May 1988 Course: Agglomeration. Powder & Bulk Solids Conference, Rosemont, IL.
- March 1988 Workshop: Filter Media. American Filtration Society Conference, Ocean City, MD.
- March 1988 Workshop: Anaerobic Treatment Processes. University of Puerto Rico, Mayagüez.
- March 1988 Seminar: Computer Aided Design Using CADKEY. CIAPR, University of Puerto Rico, Mayagüez.
- March 1988 Course: Prediction and Determination of Water Activity in Foods. Universidad de Las Américas, Puebla, México.
- February 1988 Course: Rheology of Biological Fluids. University of Puerto Rico, Mayagüez.
- May 1987 Course: Dry Powder Mixing and Blending. Powder and Bulk Solids Conference, Rosemont, IL.
- May 1987 Course: Modern Particle Size and Shape Characterization. Powder and Bulk Solids Conference, Rosemont, IL.
- September 1986 Course: Strategy of Experimentation. Dupont, Wilmington, DL
- September 1986 Course: Minicomputers, Microcomputer and Programmable Controllers for Process Control. The Center for Professional Advancement, Arecibo, PR.
- May 1985 Course: Food Sensory Evaluation. LATU, sponsored by OAS and GTZ, Montevideo, Uruguay.
- October 1980 Seminar: Viscometry. Haake-Buchler, Inc., Boston, MA.
- January-April 1980 Course: International Postgraduate Course in Computer Applications to Water Resources. Technion, Israel Institute of Technology, Haifa, Israel.
- September 1979 Course: Design of Systems with Microprocessors. Instituto Argentino de Automación Industrial, Buenos Aires, Argentina.
- May 1979 Course: Hydraulics. Instituto Argentino de Automación Industrial, Buenos Aires, Argentina.

- April 1979 Course: Steel Heat Treatments. School of Engineering, Universidad de Buenos Aires, Argentina.
- September 1977 Course: Breweries and Malteries. Interbrau, Munich, West Germany.
- June-August 1975 Course: Random Processes. School of Engineering, University of Uruguay, Montevideo, Uruguay.

LANGUAGES

Spanish	Reading/Writing/Oral Skills	Native speaker
English	Reading/Writing/Oral Skills	Excellent
French	Reading Skills	Good
French	Writing/Oral Skills	Fair
German	Reading/Writing/Oral Skills	Fair

EXTRACURRICULAR ACTIVITIES

- September 2005 International Committee Member. CIBIA V Congreso Iberoamericano de Ingenieria de Alimentos. Puerto Vallarta, Jalisco, Mexico.
- April 2004 International Committee Member: International Conference of Engineering and Food (ICEF 9), Montpellier, France.
- October 2003 Organizing Committee Member: 4th Iberoamerican Conference of Food Engineering, Valparaiso, Chile.
- 2003 Subcommittee Representative. Institute of Food Technologists Technical Presentation, Chicago, IL.
- 2002 Member: Scholarships Committee, Biological Systems Engineering, Washington State University.
- 2001 Member: Facilities Committee, Biological Systems Engineering, Washington State University.
- 2001 Chair: International Division, Institute of Food Technologists, Chicago, IL.
- 2001 Councilor: Food Engineering Division, IFT, Chicago, IL.
- 2000 Newsletter Editor, Food Engineering Division, IFT, Chicago, IL.

2000	Member: Food Engineering Pilot Plant Committee, Washington State University.
2000-2001	Chair: International Programs Committee, College of Agriculture and Home Economics, Washington State University.
1999-2001	Councilor: Nonthermal Processing Division, IFT, Chicago, IL.
1999-2000	Chair: Food Processing Pilot Plant Committee, Washington State University, Pullman.
1998-2000	Chair: Graduate Student Recruitment Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
1997-2000	Chair: Food Engineering Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
1997-1999	Member: Pulsed Electric Fields Steering Committee, EPRI-FTA, Minneapolis, MN.
1996-2000	Executive Board Members: IFT Food Engineering Division, Chicago, IL.
1996-present	Member-at-Large: IFT International Division, Chicago, IL.
1996-2000	Chair: Awards Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
1995-1998	Member: Faculty Senate Library Committee, Washington State University, Pullman.
1995-1997	Chair: Technical Staff Needs Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
1994-1995	Member: Water, Soil and Environment Engineering Search Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
1994-1996	Member: Food Engineering Search Committee, Department of Biological Systems Engineering, Washington State University, Pullman.

- 1993-1996 Editor: Food Engineering Division Newsletter, IFT, Chicago, IL.
- 1993-1996 Member: Honors and Award Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
- 1992-1998 Member: Food Processing Pilot Plant Committee, Washington State University, Pullman.
- 1992-present Member: Honorary Doctoral Degree Committee, Washington State University, Pullman.
- 1991-1997 Member: Executive Committee, Latin American Interest Group, Washington State University, Pullman.
- 1991-1993 Associate Editor: Food Engineering Division Newsletter, IFT, Chicago, IL.
- 1991-1993 Chair: Master in Food Engineering Committee, Washington State University, Pullman.
- 1991-1992 Member: Cultural Diversity Committee, College of Agriculture and Home Economics, Washington State University, Pullman.
- 1990-1991 Member: Curriculum Committee, College of Engineering and Architecture, Washington State University, Pullman.
- 1991-1998 Member: Graduate Student Recruitment Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
- 1991-1995 Member: Undergraduate Student Recruitment Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
- 1991 Member: Food Processing Research and Extension Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
- 1990 Chair: Technical Staff Needs Committee, Department of Biological Systems Engineering, Washington State University, Pullman.
- 1990 Treasurer: ACTA-PR (Puerto Rican Association for Food Science and Technology), San Juan, PR.

- 1989-1990 Chair: American Filtration Society, Caribbean Chapter, Mayagüez, PR.
- 1989-1990 Member: American Filtration Society, Caribbean Chapter, Mayagüez, PR.
- 1989-1990 Member: Optimization in the Manufacturing of Puerto Rican Cheese, University of Puerto Rico, Mayagüez.
- 1988-1989 President: Sigma Xi, The Scientific Research Society, Mayagüez, PR.
- 1988-1989 Member: Sigma Xi, Southeast Region, Nominations Committee, Mayagüez, PR.
- 1987-1989 Member: Industrial Utilization of Puerto Rican Products from Aquaculture, University of Puerto Rico, Mayagüez.
- 1987-1988 Member: Inter-institutional Doctoral Program between University of Puerto Rico and Ponce Medical School, Mayagüez.
- 1986-1990 Member: Master in Food Technology Committee, University of Puerto Rico, Mayagüez.
- 1986-1990 Member: Chemical Engineering Research Committee, University of Puerto Rico, Mayagüez.
- 1986-1990 Faculty Advisor: AIChE and IIQ-PR Student Chapters, Mayagüez, PR.
- 1986-1988 Chair: Coffee Drying Committee, College of Engineering, University of Puerto Rico, Mayagüez.
- 1983-1984 President: Food Engineering Graduate Student Association, University of Massachusetts, Amherst.
- 1982-1984 Member: Graduate Council, University of Massachusetts, Amherst.
- 1982-1984 Member: General Education Council, University of Massachusetts, Amherst.

- 1982-1984 Member: Academic Priorities Committee, University of Massachusetts, Amherst.
- 1982-1984 Member: Academic Standards Committee, University of Massachusetts, Amherst.
- 1982-1983 Senator: Graduate Student Senate, University of Massachusetts, Amherst.
- 1968-1974 Member: Movimiento Estudiantil Benéfico Uruguayo (Uruguayan Movement for Children's Welfare), (1970-1972, President), Montevideo, Uruguay.