

V.M. (Bala) Balasubramaniam, Ph.D.

The Ohio State University, 2015 Fyffe Road,
333 Parker Food Science and Technology
Columbus, OH 43210 USA
Phone: 614 292 1732 Cell Phone: 614 266 2760
Fax: 614 292 0218
E-mail: Balasubramaniam.1@osu.edu
URL: <http://u.osu.edu/foodsafetyeng/>

EDUCATION

Ph.D. Agricultural Engineering (Food Engineering), 1993. The Ohio State University, Columbus OH, USA.
M.Eng. Agricultural and Food Engineering (Post-harvest Technology), 1989. Asian Institute of Technology, Bangkok, Thailand.
B.E. (Ag) Agricultural Engineering, 1987. Tamil Nadu Agricultural University, Coimbatore, India.

PROFESSIONAL EXPERIENCE

The Ohio State University, Columbus, OH 43210.

Department of Food Science and Technology & Department of Food, Agricultural and Biological Engineering.

Professor (10/2011- present).

Associate Professor (10/2006-09/2011).

Assistant Professor (11/2002 – 09/2006).

Graduate Research Associate (01/1990-12/1993).

Illinois Institute of Technology (IIT), Summit, IL 60501.

National Center for Food Safety and Technology (NCFST) & Department of Chemical and Environmental Engineering.

Associate (Research) Professor (07/1998 – 09/2002).

Assistant (Research) Professor (10/1995-07/1998).

Co-leader (academic), Food Processing Working Group, National Center for Food Safety and Technology (01/1996-09/2002).

Director of Graduate Studies, Food Safety and Technology/Food Process Engineering, Department of Chemical and Env Eng (01/1997-09/2002).

The University of Georgia, Griffin, GA 30223.

Center for Food Safety and Quality Enhancement

Postdoctoral Research Associate (01/1994-10/1995).

Rangsit University, Department of Mechanical Engineering, Bangkok, Thailand.

Lecturer (09/1989-12/1989).

HONORS AND AWARDS

1. Division lecturer, Food Engineering Division (2019), Nonthermal Processing Division (2016), Institute of Food Technologists, Chicago, IL.
2. The Ohio State University, College of Food Agriculture and Environmental Sciences, Ohio Agricultural Research and Development Center (OARDC) 2018 Innovator of the year award.
3. Editor-In Chief, Journal of Food Process Engineering (Wiley) 2018-present.
4. Invited External Accessor of Bachelor of Engineering in Process and Food, Universiti Putra Malaysia, Nov 2017.
5. 2017 IFT Calvert L. Willey Distinguished Service Award, Institute of Food Technologists (IFT), Chicago, IL.
6. 2016 Distinguished AIT alumni award for excellence in research and scholarship, Asian Institute of Technology, Thailand.
7. 2016 Fellow, International Academy of Food Science and Technology (IAFoST), International Union of Food Science and Technology (IUFoST).
8. 2015 Outstanding Service Award, IFT Nonthermal Processing Division.
9. Member, 2014 Suja Scientific Advisory Board, San Diego, CA
10. 2012 Fellow, Institute of Food Technologist, Chicago, IL.
11. 2011 Distinguished Research Faculty Award, Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH. April 2011.
12. Honorary Professor, School of Food and Biological Engineering Jiangsu University, Zhenjiang, China (2009). The title recognized Dr. Bala's research contribution to high pressure processing of foods. Oct 2009.
13. 2008 Research Award of Merit, Gamma Sigma Delta The Honor Society of Agriculture, Ohio State University Chapter. May 30, 2008.
14. Hormel Sprit in Innovation Research Award. October 2006. Hormel Corporation, Austin, MN. The award recognized Dr. Bala's research contribution to high pressure processing of foods.

15. 2004 Outstanding Member Award, Institute of Food Technologists, Nonthermal Processing Division. Elected to 2004 Hall of Honor in recognition of outstanding professional and scientific service to the division.
16. Election to Honor Societies: Phi Tau Sigma, Food Science and Tech honor society (2012); Sigma Xi, The Scientific Research Society (1995) Gamma Sigma Delta Agriculture Honor Society (1993); Alpha-Epsilon Agricultural Engineering Honor Society (1992).
17. Government of Japan Scholarship, Asian Institute of Technology (1988-89).
18. Recipient of Gold Medals for Academic Excellence, Tamil Nadu Agricultural University, Coimbatore, India (1987-88). University top rank holder.
19. Merit Scholarship, Tamil Nadu Agricultural University, Coimbatore, India & Indian Council on Agricultural Research (1984-87).

TEACHING

Illinois Institute of Technology, Chicago, IL.

1. FST 403/503, Food Safety and Processing Technologies, (3 credit; 20 students per semester) (1995-96).
2. FST/FPE 521, Food Process Engineering (3 credit; 20 students per semester) (1995-2000).
3. FST/FPE 522, Advanced Food Process Engineering (3 credit; 20 students per semester) (1997-2002).
4. FST/FPE594, Special Problems-Principles of high pressure processing (2000-2002; 15 students per semester).

The Ohio State University, Columbus, OH.

1. FDSCTE 5400, Unit Operations in Food Processing (3 credit) 2013-present (45 students per semester; 2 lectures and 4 pilot plant/recitation sessions per week).
2. FABENG 4410, Unit Operations in Food Engineering (3 credit) 2013-present (5 students; semester course; 2 lectures and 4 pilot plant/recitation sessions per week).
3. Lead Instructor and Coordinator, Departmental Seminar, Food Science and Technology (Autumn 2018 & Spring 2019)
4. FDSCTE 7193-1030 (cross-listed as FABE 4193-02020) Independent study-Nonthermal processing technologies (12 students; Autumn 2014).
5. FDSCTE 630, Principles of Food Processing (4 credit) 2003- 2012 (about 35-45 students; 10-week long, 3 lectures and two half-day pilot plant lab sessions

- per week).
6. FDSCTE 648, Essentials of Food Plant Operations (3 credit) 2003-2012 (10%; about 30 students).
 7. FDSCTE 401, Introduction to Food Processing (3 credit) 2004-2012 (about 35 students; 10-week long, two half-day pilot plant lab sessions per week).

RESEARCH FOCUS

Modern consumers seek food and beverages that deliver healthy nutrients and bioactive compounds. Health conscious consumers also pay close attention to the ingredients in processed foods. To address these consumer concerns, our research focuses on the development and validation of various innovative food manufacturing technologies, particularly high pressure based technologies that improve nutritional value, safety and quality of food using a multi-disciplinary approach.

ADVISING

Dr. Bala supervised 11 post-doctoral researchers, 16 visiting scholars, 10 doctoral students, 17 MS students, and 7 undergraduate students. Currently he is advising 3 doctoral students, 1 post-doctoral associate and 1 research associate. Laboratory alumni are either employed in the food industry or working in academia.

Illinois Institute of Technology

Masters Students (Thesis) (M.S. only graduate program)

1. Sundar Balasubramaniam. 2000. M.S. Food Process Engineering. Thesis. Influence of compression heating and pH on inactivation of bacterial spores during high pressure processing. (2 peer-review journal articles; Senior Process Engineer, PepsiCo, Chicago, IL).
2. Gopi Sivasubramaniam. 2000. M.S. Food Process Engineering. Electrical conductivity of foods (non-thesis). (Process Engineer, Foster Wheeler, Houston, TX).
3. Khin Thidar Thant. 2001. M.S. Food Safety and Technology. Thesis. Influence of process parameters on inactivation of *Escherichia coli* O 157: H7 by pulsed electric field (Food Technologist, Sweet Ovations, LLC Philadelphia, PA).
4. Amy Schauwecker. 2001. M.S. Food Safety and Technology. Thesis. Influence of high pressure processing on packaging materials and the migration of pressure transmitting fluid (One peer-review journal article; Senior Group Manager R&D Operations, Del Monte, San Francisco, CA).
5. Vasuhi Rasanayagam. 2002. M.S. Food Process Engineering. Thesis. High pressure processing. Part.1. Compression heating of fatty foods under pressure. Part II. Comparison of effectiveness of single and double pulse high pulse pressure

processing on inactivation of *Bacillus subtilis* spores. (*One peer-review journal article; Senior Scientist, Airliquide, Newark, DE*).

6. Ganesh Narayanaswamy. 2002. M.S. Chemical Engineering (co-advised with Prof. Parulekar). Thesis. Compression heating characteristics of carbohydrates during high pressure processing. (Project Manager, Granules Omnichem Private Limited, Vishakhapatnam, India).
7. Vivek Keshavan. 2002. M.S. Chemical Engineering (co-advised with Prof. Parulekar). Thesis. Compression heating characteristics of proteins during high pressure processing. (*CSV/QA Specialist, Bayer HealthCare San Francisco, CA*).

The Ohio State University

Masters Students (Thesis)

1. Ambuja Srinivasan Westbeld. 2004. M.S. Food Science and Nutrition. Inactivation of bacterial spores by pressure assisted thermal processing. Preliminary experiments for shelf stable egg study. (non-thesis). ANSR Source).
2. Sandeep Rajan. 2005. M.S. Food Science and Nutrition. Inactivation kinetics of bacterial spores in egg patties by pressure-assisted thermal processing. (*Two peer-review journal articles; Technical Sales Manager, Micro Thermics, Raleigh, NC*).
3. Maria Fernanda Villacis . 2006. M.S. Food Science and Nutrition. Effect of high pressure on moisture and NaCl diffusion into turkey breast. (*One peer-review journal article; Recipient Fulbright scholarship to support graduate study; Food Technologists, Nestle, France*).
4. Raghul Dhall. 2008. M.S. Food Science and Nutrition. Preserving restructured vegetable product using high pressure processing (non-thesis). (*Food Technologists, Agro Industry, Punjab, India*).
5. Somerville, Jeremy. 2009. M.S. Food Science and Technology. The Effects of Pressure Assisted Thermal Processing on the Quality Attributes of Black Beans. (*One peer-review journal article; Product Technology Specialist at Nestlé R&D, Cleveland, OH*).
6. Huseyin Ayvaz. 2010. M.S. Food Science and Technology. Influence of packaging material and storage conditions on quality attributes of pressure-assisted thermally processed carrots. (*Two peer-review journal article, one book chapter. Department of Food Engineering, Canakkale Onsekiz Mart University, Canakkale 17020, Turkey*).
7. Joshua Smith. 2010. M.S. Food Science and Technology. Pressure Pre-Treatment for Enhanced Regreening of Thermally Sterilized Green Beans. (Research Scientist at So Delicious Dairy Free/WhiteWave Foods *Eugene, OR*).
8. Dhakal, Santosh. 2013. Formulation of hypoallergenic plants based beverages by high pressure processing (Two- peer review journal articles; Fulbright Scholarship for graduate study at OSU)

9. Colleen C. Nackerman. 2014. M.S. Food Science and Technology. Storage Stability of Polyglutamyl 5-methyltetrahydrofolate in Broccoli After High-Pressure Processing. Food Scientist, Avure Technologist, Middletown, Ohio.
10. Shreya Kamat. 2018. The effect of combined pressure-thermal treatment on quality changes of acidified vegetables during extended storage. M.S. Food Science and Technology.

Ph.D.

1. Raghupathy Ramaswamy. 2007. Ph.D. Food Science and Nutrition. Thermal behavior of food materials during high pressure processing. (*Co-advised with Prof. Sastry; Six peer-review journal articles; Student Representative & Webmaster, IFT Nonthermal Processing Division; Thermal Processing Specialist/Process Authority Heinz, Wexford, PA*).
2. Stephen Min. 2008. Ph.D. Food Agricultural and Biological Engineering. Properties of food and buffer solutions during high pressure processing: in-situ measurement of density, compressibility, electrical conductivity and reaction volume. (*Co-advised with Prof. Sastry; Four journal articles; Student Representative, IFT Food Engineering Division; Director, Research and Development at Wendy's Columbus OH*).
3. Wannasawat Ratphitagsanti. 2009. Ph.D. Food Science and Technology. Approaches for Enhancing Lethality of Bacterial Spores Treated by Pressure-Assisted Thermal Processing. (*six peer-review journal articles; 1st place, Developing Scientist Award, 2007 IAFP Annual Meeting; Assistant Professor; Department of Product Development Kasetsart University, Bangkok, Thailand*).
4. Loc Thai Nguyen. 2009. Ph.D. Food Science and Technology. Quality and Thermo physical Properties of Pressure Treated Foods. (*six peer-review journal articles; Assistant Professor, Asian Institute of Technology, Bangkok, Thailand*).
5. Rockendra Gupta. 2010. Ph.D. Food Science and Technology. Pressure Assisted Thermal Processing: Tomato Carotenoid Stability During Processing & Storage and Feasibility of Using Chemical Markers for Evaluating Process Uniformity. (*Five peer-review journal articles; Graduate Student Representative, IFT Nonthermal Processing Division; 2nd place OVIFT Graduate Poster Competition, Food Technologist, Abbott Nutrition, Columbus, OH*).
6. Sung Hee Park. 2012. Ph.D. Food Science and Technology. Evaluating the feasibility of producing shelf-stable low-acid vegetables through pressure-ohmic thermal sterilization. Studies on product quality and microbiological safety (four peer-review journal articles).
7. Dhakal, Santosh. 2016. Evaluation of Synergistic, Additive and Antagonistic Effects During Combined Pressure-thermal Treatment on Selected Liquid Food Constituents by Reaction Kinetic Approach. Ph.D. Dissertation in Food Science and Technology (three peer-review journal articles)
8. Bing Yan. 2016. High Pressure Homogenization of Selected Liquid Beverages. Ph.D. Dissertation in Food Science and Technology (IFT Nonthermal Processing Division)

- Student Representative; Chinese Govt Scholarship; three peer-review journal articles).
9. Fira Zulkurnain. 2017. Crystallization of Lipids under High Pressure for Food Texture Development (Malaysian Government Scholarship; Co-advised with F Maleky; First Prize, Graduate Student Poster Competition 2016 Conference of Food Engineering; three peer-review journal articles).
 10. Rarinthorn Thammakulkrajang. 2018. Pressure-Assisted Thermal Processing of Bacterial Spores: Influence of Selected Product and Packaging Parameters. Ph.D. Dissertation in Food Science and Technology

Current Students

1. Shreya Kamat. Ph.D. Food Science and Technology (part-time student & full time research associate)
2. Janahar, Jerish Joyner Ph.D. Food Science and Technology.
3. Howard Park, Ph.D. Food Science and Technology

Visiting Professors/Scholars

1. Dr. G. Akdemir Evrendilek, Department of Food Engineering, Faculty of Agriculture, Mustafa Kemal University, Turkey. Scientific and Technological Research Council of Turkey (TUBITAK) (2005 Summer).
2. Dr. Navin Rastogi, Central Food Technological Research Institute (CFTRI), Mysore, India. Overseas research associateship, Department of Biotechnology (DBT), Government of India, New Delhi (03/06-03/07).
3. Dr. Bo Jiang, Professor, Southern Yangtze University, Jiangsu, China. (09/06-12/06).
4. Mr. A.R.P. Kingsly, Central Institute of Post Harvest Engineering and Technology, India. Norman E. Borlaug international agricultural sciences and technology fellow, Indo-US Knowledge Initiative in Agriculture (10/06-11/06).
5. MS. Bindu Jaganath Scientist, Central Fisheries Technology Research Institute, Cochin, India. Norman E. Borlaug international agricultural sciences and technology fellow, Indo-US Knowledge Initiative in Agriculture (03/08-04/08).
6. Mr. Rajan Sharma, National Dairy Research Inst, Haryana, India. Norman E. Borlaug international agricultural sciences and technology fellow, Indo-US Knowledge Initiative in Agriculture (04/08).
7. Prof. Yongkun Ma, School of Food & Biological Engineering, Jiangsu University, China (2009).
8. Dr. Seung Lee, CJ Foods, Korea (2010-11).
9. Dr. Natalia Szerman, Instituto Tecnología de Alimentos (ITA) Instituto Nacional de Tecnología Agropecuaria(INTA) Buenos Aires, Argentina. (09/11-12/11)
10. Dr. Suresh K. Devatkal. Central Institute of Post-harvest Engineering and Technology Ludhiana. Punjab India. March 2012-November 2012.
11. Mr. Erdal Agcam, Visiting doctoral student, Çukurova University in Turkey. Oct 2014-15.

12. Ms. Salais Fierro, Fabiola, Visiting doctoral student, University of Alberta. Dec 2014.
13. Ms. Anna Westphal, Visiting doctoral student, Friedrich Schiller University in Jena, Germany (2015)
14. Dr. Kshirod Kumar Dash, Visiting Assistant Professor, Tezpur University, Assam, India (2016 March-2017 March)
15. Dr. Hongkang Zhang, Visiting Associate Professor, College of Light Industry and Food Zhongkai University of Agriculture and Engineering (2016 April –2017 April)
16. Dr. Alifdalino Sulaiman, Department of Process and Food Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia (2018 December-2019 Sep)

Post-doctoral associates

1. Dr. Upasana Abbott (1998-2000).
2. Dr. Ken Khiron (1996-1998).
3. Dr. Sadhana Ravishankar (1999-2001).
4. Dr. Adhikari, C. (1997-1999).
5. Dr. Srilatha Pandrangi (2003-04).
6. Dr. Siquan Li (2004-05).
7. Dr. Juhee Ahn (2004-06).
8. Dr. DeLamo-Castellvi, Silvia (2007).
9. Dr. Hossein Daryaei (2009-12).
10. Dr. Sunghee Park (2012-2013).
11. Dr. Martinez-Monteagudo, Sergio I. (2013-2014).
12. Dr. Jie “Chris” Xu (2019-present)

Undergraduate Research

1. Boon Tee. FST. 2003. Undergraduate research.
2. Maggie Wisman, FST. 2006. Undergraduate honors thesis.
3. Chelsea Johnson. FST. 2009-10. Undergraduate research.
4. Horton, Elizabeth S. FABE. 2013-2015. Undergraduate research.
5. Khawaja, Natasha. ChemEng. 2013-2015. Undergraduate honors research.
6. Chatterjee, Usoshi, FABE, 2015 Undergraduate research
7. Schabel, Conner L. FABE, 2017. Undergraduate research
8. Abbie Gohrband. FABE. 2018. Undergraduate research

External Examiner

1. Sajith Wimalaratne, Ph.D. School of Graduate Studies, The University of Auckland. 2009.
2. Hussein F. Hassan. Ph.D. Graduate School, McGill University, Montreal, Canada. 2010.
3. Sravani Gupta. 2012. Ph.D. Graduate School. The University of Auckland, New Zealand.
4. Ajaypal Singh. 2012. PhD. Graduate School, McGill University, Montreal, Canada.

5. Martinez-Monteagudo, Sergio. 2013. Ph.D. Graduate School, University of Alberta, Edmonton, Canada.
6. Anika Singh, 2105. Ph.D. Department of Food Science and Agricultural Chemistry, McGill University, Montreal, QC Canada.

Ph.D. Graduate Student (Candidacy or Dissertation) Committees, The Ohio State University

1. Pisit Wongsan-NGasri, PhD. 2004
2. Yettella Rames Reddy, FST 2005
3. Laleh Loghavi, Ph.D. FABENG. 2005
4. Hyun Jung Kim. Ph.D. FST. 2007.
5. SeungRan Yoo. Ph.D. FST. 2007.
6. Sanjay S. Sarang, Ph.D. FASE. 2007.
7. Shantanu Yousuf. Ph.D. FST. 2007.
8. Yang Huang, Ph.D. FST. 2007.
9. Anand Subramanian, Ph.D. FST. 2007.
10. Yoon-Hee Lee, Ph.D. FST. 2007.
11. Chitra Kusnadi, Ph.D. FASE 2008.
12. Gabriel Sanglay, Ph.D. FST 2008.
13. Chanun Somboonvechakaran. Ph.D. FST. 2008.
14. Hao-Hsun Chang, Ph.D. FST. 2008.
15. Francisco Parada Rabell. Ph.D. FST. 2009.
16. Mustafava Verma. Ph.D. FST. 2009.
17. Yettella Ramesh Reddy. Ph.D. FST. 2008.
18. Yan Yuan, Ph.D. FST 2009.
19. Daniel Rubio-Diaz, Ph.D. FST. 2009.
20. Romel Somavat, Ph.D. FASE. 2009.
21. Yichi Xu, Ph.D. FST. 2009.
22. Gaurav Jain, Ph.D. FASE. 2009.
23. Francisco Parada Rabell, FST. 2009
24. Nutsuda Sumonsiri, 2010
25. Elizabeth Grasso, 2010
26. Yang Huang, 2010
27. ChongTao, Ge, FST 2011
28. Amal Agila, FST. 2012
29. Ashley Predmore, FST, 2013
30. Teerarat Likitwattanasade, FST, 2013
31. Yesil Mustafa, FST, 2015
32. Xu Yang, FST, 2015
33. Mengyuan Fan, 2016
34. Mengjia Yang, 2017
35. Mustafa Yesil, 2017

36. Walaa E Hussein, FST 2017
37. Emily Holman, FST. 2018

M.S Graduate Student Committee The Ohio State University

1. Mary Beth Mayr. M.S. FST. 2005.
2. Sarvesh Gupta. M.S. FASE. 2005.
3. Maria Bebeko. FST. 2005
4. Curtis Wood. FST. 2006
5. Shantanu Yousef. FST 2006
6. Nathan Baldauf, FST. 2006.
7. Cynthia Black. FST. 2007
8. Vinodini Emmanuela Buck, M.S. FST. 2007.
9. Naeemah Hall. FST. 2007.
10. Chitra Kusnadi. FABENG. 2007.
11. Joeseeph Jones. M.S. FST 2008.
12. Jerry James de la Torre. M.S. FASE. 2009.
13. Timothy Chapman M.S. FST. 2009.
14. Areerat Hansanugrum, 2010
15. Goksel Tirpanci. FST. 2011
16. Didem Aykas. FST. 2012
17. Chole Huang, FASE, 2015
18. Mengjia Yang, FST, 2015
19. Paul Park. FST. 2016
20. Nathan Morrison. FST. 2016
21. Xiaoyi Zhu. FST. 2016

LIST OF BOOKS, BOOK CHAPTERS AND JOURNAL ARTICLES

Dr. Bala authored or co-authored 21 book chapters, 111 peer-reviewed publications 25 bulletins and food processor fact sheets and 5 webinars. Co-edited 2 books on nonthermal processing. Dr. Bala authored about 180 presentations at various meetings sponsored by professional societies, trade associations and the food industry.

According to Thomson Reuters web of science, Dr. Bala has h index of 29 (as of August 2019), while he has h-index of 33 and 39 in Scopus and Google scholar respectively. Two papers co-authored by Dr. Bala received highly cited paper designation from Thomson Reuters Web of Science. Highly cited papers are those received enough citations to place them in the top 1% of Agricultural Sciences based on a highly cited threshold for the field and publication year.

BOOK

1. Zhang, H. Q., G. Barbosa-Canovas, V.M. Balasubramaniam, P. Dunne, D. Farkas, and J. Yuan. (Eds). 2011. *Nonthermal Processing Technologies for Food*. Chicago: IFT Press, Wiley-Blackwell Publishing.
2. *Balasubramaniam, V.M.*, Gustavo V. Barbosa-Canovas and Huub Lelieveld, 2016. *High Pressure Processing of Food-Principles, Technology and Application*. Springer, LLC, NY. New York, NY.

BOOK CHAPTERS

1. Resurreccion, A.V.A., M.S. Chinnan, M.C. Erickson, I.B. Hashim, V.M. Balasubramaniam, P. Mallikarjunan, and J.-Y. Liao. 1997. Consumer-based approach in developing alternative packaging systems for fluid milk for the elderly. In 1996 Packaging Yearbook. Edited by B. Blakistone. Washington, D.C: National Food Processors Association. 16-35.
2. *Balasubramaniam, V. M.*, and M. S. Chinnan. 1997. Role of packaging in quality preservation of frozen foods. In *Quality in Frozen Food*. Edited by M. C. and Y. -C. Hung. New York: Chapman & Hall. 296-306.
3. *Balasubramaniam, V.M.* 2003. High-pressure food preservation. In *Encyclopedia of Agricultural, Food and Biological Engineering*. Heldman, D. (Ed.) Marcel Dekker, Inc., New York. pp. 490–496.
4. Pandrangi, S. and V.M. Balasubramaniam. 2005. High pressure processing of salad and ready meals. In *Emerging Technologies for Food Processing* Da-Wen Sun (Ed.) Elsevier Academic Press, London, UK. pp. 33-45.
5. Raghupathy Ramaswamy, V.M. Balasubramaniam, and S.K. Sastry. 2005. Properties of food materials during high pressure processing. In *Encyclopedia of Agricultural, Food, and Biological Engineering*. Heldman, D. (Ed.) Marcel Dekker, Inc., New York.
6. Ramaswamy, R., Ahn, J., V.M. Balasubramaniam, Rodriguez-Saona, L. E., and Yousef, A. E. 2007. Food Safety Engineering. In *Handbook Farm, Dairy, and Food Machinery*, Myer Kutz. (Ed.) Norwich, NY: William Andrew Publishing. 45-69.
7. Wannasawat Ratphitagsanti, Silvia De Lamo-Castellvi and V.M. Balasubramaniam. 2008. Biological spore inactivation by pressure-assisted

- thermal processing: Challenges in finding a suitable biological indicator for process validation. In *Biological indicators for sterilization processes*, Margarita Gomez and Jeanne Moldenhauer (Eds). River Grove, IL. USA: Parenteral Drug Association and Davis Healthcare International Publishing. 413-450.
8. V.M. Balasubramaniam. 2010. High Pressure Food Preservation. In *Encyclopedia of Agricultural, Food, and Biological Engineering*. Edited by Dennis R. Heldman and Carmen Moraru. New York, NY: Taylor & Francis.
 9. Loc Thai Nguyen and V.M. Balasubramaniam. 2011. Fundamentals of Food Processing using High Pressure. In *Handbook of Nonthermal Processing Technologies for Food*. Zhang, H. Q., G. Barbosa-Canovas, V.M. Balasubramaniam, P. Dunne, D. Farkas, and J. Yuan. (Eds). Chicago: IFT Press, Wiley-Blackwell Publishing 3-19.
 10. Rockendra Gupta and V.M. Balasubramaniam. 2012. High-Pressure Processing of Fluid Foods. In *Novel Thermal and Non-Thermal Technologies for Fluid Foods*. Edited by: P.J. Cullen, Brijesh K. Tiwari and Vasilis Valdramidis. Elsevier Inc. London, UK. Pages 109–133
 11. Daryaei, H., and V.M. Balasubramaniam. 2012. Microbial decontamination of food by high hydrostatic pressure. In *Microbial decontamination in the food industry: Novel methods and applications*. Edited by Ali Demirci and Michael O. Ngadi. Woodhead Publishing Series in Food Science, Technology and Nutrition 234. Cambridge, UK. Pages 370-406.
 12. Ramaswamy, R., Ahn, J., V.M. Balasubramaniam, Rodriguez-Saona, L. E., and Yousef, A. E. 2013. Food Safety Engineering. In *Handbook Farm, Dairy, and Food Machinery*, 2nd edition, Myer Kutz. (Ed.) Norwich, NY: William Andrew Publishing. 43-66.
 13. Yousef, A.E., and V.M. Balasubramaniam. 2013. Physical methods of preservation. In *Food Microbiology: Fundamentals and Frontiers*, 4th Ed. Edited by M. P. Doyle and R. L. Buchanan ASM Press, Washington, D.C. Pages 737-763.
 14. Park, Sunghee, B.P. Lamsal, and V.M. Balasubramaniam. 2014. Principles of Food Processing. Chapter 1. In *Food Processing: Principles and Applications*, 2nd edition. Clark, S., Jung, S. and Lamsal, B. (editors) Wiley-Blackwell.
 15. Sergio I Martinez-Montegudo and V.M. Balasubramaniam. 2016. Fundamentals and Applications of High Pressure Processing Technology. Chapter 1. In *High Pressure Processing of Food-Principles, Technology and Application*. Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New

York, NY. pp 3-17.

16. *Balasubramaniam, V.M., Gustavo V. Barbosa-Cánovas, and Huub L.M. Lelieveld.* 2016. Industrial Scale High Pressure Processing Equipment. Chapter 3. In *High Pressure Processing of Food-Principles, Technology and Application.* Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New York, NY. Pp 39-65.
17. *Balasubramaniam, V.M., Gustavo V. Barbosa-Cánovas, and Huub L.M. Lelieveld.* 2016. Preface. In *High Pressure Processing of Food-Principles, Technology and Application.* Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New York, NY. Pp v-vii.
18. Ayvaz, H., *VM. Balasubramaniam,* and Tatiana Koutchma. 2016. High Pressure Effects on Packaging Material. Chapter 5. In *High Pressure Processing of Food-Principles, Technology and Application.* Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New York, NY. Pp 73-93.
19. Sung Hee Park, Loc Thai Nguyen, Stephen Min, *VM. Balasubramaniam,* and Sudhir K. Sastry. 2016. In Situ Thermal, Volumetric and Electrical Properties of Food Matrices Under Elevated Pressure and the Techniques Employed to Measure Them. Chapter 6. In *High Pressure Processing of Food-Principles, Technology and Application.* Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New York, NY. Pp 97-121.
20. Hossein Daryaei, Ahmed E. Yousef, and *V.M. Balasubramaniam.* 2016. Microbiological Aspects of High Pressure Food Processing: Inactivation of Vegetative Microorganisms and Spores. Chapter 14. In *High Pressure Processing of Food-Principles, Technology and Application.* Balasubramaniam, V.M. Gustavo V. Barbosa-Canovas and Huub Lelieveld. (editors). Springer LLC, New York, NY. Pp 271-294.
21. Kamat, S. and V.M. Balasubramaniam. 2020. High pressure process development for food safety and quality, Chapter 23. In *Food Safety Engineering.* Ali Demirci, Hao Feng and Kathirvan Krishnamoorthy (eds). (in press)

PEER REVIEWED JOURNAL ARTICLES

1. *Balasubramaniam, V.M., V.V. Sreenarayanan, R. Visvanathan, and D. Balasubramaniam.* 1993. Design, development, and evaluation of a cassava chipper. *Agricultural Mechanization in Asia, Africa, and Latin America* 24 (1): 60 – 64.

2. *Balasubramaniam, V.M.* and S.K. Sastry. 1994. Liquid-to-particle heat transfer in a non-Newtonian carrier medium during continuous tube flow. *Journal of Food Engineering* 23(2):169-187.
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80. Gupta, Rockendra, Kopec, Rachel, Balasubramaniam, V.M., Schwartz, S.J. 2009. Combined pressure temperature effects on lycopene stability and isomerization in tomato juice . 2009 Annual Research Conference, The Ohio Agricultural Research and Development Center (OARDC). Columbus, OH.
81. Min Stephen, Sudhir Sastry, Chaminda Samaranayake, V.M. Balasubramaniam. 2009. In-situ measurement of reaction volume and calculation of pH of weak acid buffers under pressure to 400 MPa at 25°C . Abstract no. 36 Conference of Food Engineering. Columbus, OH. April 5-8.
82. Nguyen Loc T and V.M. Balasubramaniam. 2009. Integrated process lethality during pressure-assisted thermal processing: A modeling approach . *Abstract no. 202-03*. 2009 Annual Meeting, Institute of Food Technologists, Anaheim, CA. June 5-10.
83. Nguyen Loc, T., V.M. Balasubramaniam, and S.K. Sastry. 2009. In-situ determination of specific heat, thermal conductivity and diffusivity of selected foods under pressure. Abstract no. 116 Conference of Food Engineering. Columbus OH. April 5-8.
84. Ratphitagsanti Wannasawat, Luis E. Rodriguez-Saona, and V. M. Balasubramaniam. 2009. Characterization of *Bacillus amyloliquefaciens* spores after thermal and pressure-assisted thermal processing by infrared micro spectroscopy and multivariate analysis . Abstract 125-04. 2009 Annual Meeting, Institute of Food Technologists. Anaheim, CA. June 5-10.
85. Ratphitagsanti Wannasawat, Luis E. Rodriguez-Saona and V.M. Balasubramaniam. 2009. Impact of Pressure Pulsing on Biochemical Changes of *Bacillus amyloliquefaciens* Spore Inactivation through Fourier Transform Infrared Microspectroscopy . *Abstract P3-92*. 2009 Annual Meeting, International Association for Food Protection. Grape Vine, TX. July 12-15.
86. Daryaei, H., Balasubramaniam, V.M., and AE Yousef. 2010. Lethality enhancement of pressure-assisted thermal food processing against *Bacillus amyloliquefaciens* spores using antimicrobial compounds . 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20.
87. Elizabeth M. Grasso, Jeremy A. Somerville, V.M. Balasubramaniam and Ken Lee. 2010. Minimal effects of high pressure treatment on *Salmonella enteric* serovar Typhimurium inoculated peanut butter . 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20,
88. Gupta Rockendra, Galina Mikhaylenko, V.M. Balasubramaniam, and Juming Tang. 2010. Combined pressure-temperature effects on the kinetics of chemical marker (4-hydroxy,5-methyl, 3(2H)-furanone) formation in whey protein gels. 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20.
89. Gupta Rockendra, V.M. Balasubramaniam, Steven J. Schwartz and David Francis. 2010. Storage stability of lycopene in tomato juice subjected to various pressure-heat

- combinations . 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20.
90. Jeremy Somerville and V.M. Balasubramaniam. 2010. The effects of pressure-assisted thermal processing on the quality attributes of black beans (*Phaseolus vulgaris* L.). 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20.
 91. Loc T Nguyen, V.M. Balasubramaniam, and Sudhir K. Sastry. 2010. Determination of in-situ thermal conductivity, thermal diffusivity, volumetric specific heat and isobaric specific heat of selected foods under pressure . 2010 Annual Meeting of Institute of Food Technologists. Chicago, IL. July 17-20.
 92. Hossein Daryaei, V.M. Balasubramaniam, and J. David Legan. 2011. Inactivation of *Bacillus cereus* spores in cooked rice by combined pressure-thermal treatment. 2011 Annual Meeting of Institute of Food Technologists. New Orleans, LA. June 11-14.
 93. Huseyin Ayvaz, V.M. Balasubramaniam, Schirmer, Sarah L. and Y. Parulekar. 2011. Influence of packaging materials and storage conditions on the quality attributes of pressure-assisted thermally processed carrots. 2011 Annual Meeting of Institute of Food Technologists. New Orleans, LA. June 11-14.
 94. Rockendra Gupta, Rachel E. Kopec, V.M. Balasubramaniam, and Steven J. Schwartz. 2011. Combined Pressure-Temperature Effects on Carotenoid Retention and Bioaccessibility in Tomato Juice. 2011 Annual Meeting of Institute of Food Technologists. New Orleans, LA. June 11-14.
 95. Sung Hee Park, V.M. Balasubramaniam, Sudhir K. Sastry. 2011. Estimating Pressure Induced Changes Vegetable Tissues Using In Situ Electrical Conductivity Technique and Instrumental Analysis. 2011 Annual Meeting of Institute of Food Technologists. New Orleans, LA. June 11-14.
 96. Buckow, R., T. Kouchma, V.M. Balasubramaniam. 2011. Energy Efficiency of non-thermal Processes. 2011 Nonthermal Processing Workshop, Osnabruck, Germany, October 12-14.
 97. Balasubramaniam, V.M. 2012. Influence of Selected Packaging Materials on Quality Aspects of Pressure Assisted Thermally Processed Food. Abstract 240-01. Annual Meeting of Institute of Food Technologists, Las Vegas, NV. June 25-28.
 98. Daryaei, H. and V.M. Balasubramaniam. Efficacy of Pressure-Assisted Thermal Processing Against *Bacillus amyloliquefaciens* Spores in a Pork-Vegetable Product. Abstract no. 137-06 Annual Meeting of Institute of Food Technologists, Las Vegas, NV. June 25-28.
 99. Sastry, S.K. V.M. Balasubramaniam, J. Tang, J. Simunovic. 2012. Operation of pilot facilities and costs (video + discussion). In Quality Changes in Foods Processed Using Alternative Processing Technologies. Pre-Annual Meeting Short Course, Annual Meeting of Institute of Food Technologists LVH-Las Vegas Hotel and Casino, Las Vegas, NV. June 25-28.
 100. Natalia Szerman, Jeremy Somerville, Hossein Daryaei, Ana Sancho, V.M. Balasubramaniam. 2012. Evaluation of High Pressure Processing for the Pasteurization or Sterilization of Cubed Beef Meat with Broth. 16th World

Congress of Food Science and Technology Foz do Iguaçu, Parana, Brazil, August 5 – 9.

101. Sunghee Park, V.M. Balasubramaniam, Sudhir Sastry, Jiyoung Lee. 2012. Inactivation of *Bacillus amyloliquefaciens* and *Bacillus stearothermophilus* Spores Using Combined Pressure, Electric Field, and Heat Treatment. Abstract no. 293-06. Annual Meeting of Institute of Food Technologists Las Vegas, NV. June 25-28.
102. Santosh Dhakal, M. Monica Giusti, Shridhar Sathe, V.M. Balasubramaniam. 2013. Influence of High Pressure Processing on Physicochemical Properties of Almond Milk. Abstract No. 037-19. Annual Meeting of Institute of Food Technologists Chicago, IL. July 13-16.
103. Sunghee Park, V.M. Balasubramaniam. 2013. Pressure-Assisted Ohmic Thawing: A Feasible Approach for the Rapid Thawing of Frozen Meat and Its Quality Attributes. Abstract no. 031-41. Annual Meeting of Institute of Food Technologists Chicago, IL. July 13-16.
104. Robert Brannan, Daniel Continenza, Ron Powell, V.M. Balasubramaniam. 2013. Inactivation of Polyphenol Oxidase in Three Varieties of Pawpaw *Asimina triloba* by High Pressure Processing. Abstract no. 255-93. Annual Meeting of Institute of Food Technologists Chicago, IL. July 13-16.
105. Balasubramaniam VM. 2014. Pressure-Ohmic Thermal Sterilization: A Novel Method for Sterilization of Low-Acid Foods. Annual Meeting of Institute of Food Technologists New Orleans, LA. June 21 – 24, 2014.
106. Bing Yan, Sung Hee Park, and V.M. Balasubramaniam. 2014. Application of High Pressure Homogenization to Reduce Emulsifier Usage in Whey Protein Based Emulsion Production. Annual Meeting of Institute of Food Technologists New Orleans, LA. June 21 – 24, 2014.
107. Rarinthorn Thammakulkrajang, and VM Balasubramaniam. 2014. Effect of Salt and Sugar on Microbial Spore Inactivation During Pressure Assisted Thermal Processing and Thermal Treatment in HEPES Buffer and Food Matrices. Annual Meeting of Institute of Food Technologists New Orleans, LA. June 21 – 24, 2014.
108. V.M. Balasubramaniam. 2014. Principles and Applications of Pressure-Assisted Thermal Processing: Food Safety, Packaging and Shelf Life. Annual Meeting of Institute of Food Technologists New Orleans, LA. June 21 – 24, 2014.
109. Kaitlyn E Casulli, Santosh Dhakal, Sung Hee Park, Kandiyani P Sandeep, and VM Balasubramaniam. 2014. Heat of Compression of Plastic Polymers During High Pressure Processing. Annual Meeting of Institute of Food Technologists New Orleans, LA. June 21 – 24, 2014.
110. Zulkurnain, M., Maleky, F., and Balasubramaniam, V. M. AOCs Annual Meeting". AOCs Annual Meeting Archive. Urbana, IL.
111. Zulkurnain, M. F. maleky, .V.M. Balasubramaniam. 2015. Effects of High Pressure Treatment on Structure and Physical Properties of Fat Blends of Fully

- Hydrogenated Soybean Oil. American Oil Chemists' Society 106th Annual Meeting. Chicago, IL.
112. Bing Yan, Sergio Martinez-Monteagudo, Jessica L. Cooperstone, Ken M. Riedl, Steven J. Schwartz, VM Balasubramaniam. 2015. Effect of High Pressure Homogenization on Physicochemical and Nutritional Properties of Tomato Juice. Abstract 032-035. Annual Meeting of Institute of Food Technologists Chicago, IL. July 11-14.
 113. Santosh Dhakal, V.M. Balasubramaniam, Huseyin Ayvaz, Luis Rodriguez-Saona. 2015. Study of High Pressure and Temperature Effects on Ascorbic Acid Present in Pineapple Juice. Abstract 032-078. Annual Meeting of Institute of Food Technologists Chicago, IL. July 11-14.
 114. Sergio Martinez-Monteagudo, Bing Yan, V.M. Balasubramaniam. 2015. Engineering Aspects of High Pressure Homogenization of Liquid Foods. Abstract 099-013. Annual Meeting of Institute of Food Technologists Chicago, IL. July 11-14.
 115. Musfirah Zulkurnain, V.M. Balasubramaniam, Dennis R. Heldman. 2015. Simulation and Optimization of a Pressure-Assisted-Thermal-Process for Maximum Quality Retention in CLA Rich Milk. Abstract 099-034. Annual Meeting of Institute of Food Technologists Chicago, IL. July 11-14.
 116. Santosh Dhakal, VM Balasubramaniam, Ana Paula Alonso, Jean-Christophe Cocuron Erdal Egcam Shreya Kamat. 2016. Formation of Furan in Fruit and Vegetable Juices Subjected to Combined Pressure-Thermal Treatments. Abstract 069. 2016 Annual Meeting of Institute of Food Technologists, Chicago, IL July 16-19.
 117. Santosh Dhakal, VM Balasubramaniam, Ana Paula Alonso, Jean-Christophe Cocuron Erdal Egcam Shreya Kamat. 2016. Pressure-thermal kinetics of furan formation in selected fruits and vegetable juices. 2016 Conference of Food Engineering, Columbus, OH. Sep 12-14
 118. Bing Yan, Sergio I. Martínez-Monteagudo, Jessica L. Cooperstone, Ken M. Riedl, Steven J. Schwartz, V.M. Balasubramaniam. 2016. Impact of thermal and pressure-based technologies on carotenoid retention and selected quality parameters in tomato juice. 2016 Conference of Food Engineering, Columbus, OH. Sep 12-14
 119. Musfirah Zulkurnain, VM. Balasubramaniam and Farnaz Maleky. 2016. Structural and Physical Characteristics of Fats Crystallized Under High Pressure. AOACS. Salt Lake City, Utah. May 1-4.
 120. Kshirod Dash, Shreya Kamat, and V M. Balasubramaniam. 2017. Mass Transfer Kinetics and Effective Diffusivity of High Pressure Assisted Osmotic Dehydration of Ginger. Abstract 044, 2017 IFT Annual Meeting, Las Vegas, NV. June 25-28.
 121. Shreya Kamat, Kshirod Dash, and VM Balasubramaniam. 2017. Quality Preservation of Pickled Vegetable Products Through Combined Pressure-Thermal Treatment. Abstract 038, 2017 IFT Annual Meeting, Las Vegas, NV.

June 25-28

122. Zulkurnain M., Balasubramaniam V.M., Maleky F. (2017). Mechanism of lipid crystallization under high pressure treatments. American Oil Chemists' Society 108th Annual Meeting.

INVITED PRESENTATIONS

1. Balasubramaniam, V.M., N. R. Reddy and S. Palaniappan. 1997. Inactivation of bacterial spores by high isostatic pressure processing. Research and Development Associates for Military Food and Packaging Systems. Fall Meeting, Philadelphia, PA October 28-30.
2. Balasubramaniam, V. M. 1997. High isostatic pressure inactivation of selected food spoilage organisms. Research Day, Illinois Council on Food and Agricultural Research, Springfield, IL. January 28.
3. Balasubramaniam, V.M. 1998. NCFST's initiatives in pulsed electric field technology research. Presented at NATICK-EPRI Sponsored Workshop on Pulsed Electric Field Processing, Columbus, OH. March 12.
4. Balasubramaniam, V. M. 1999. High pressure processing of foods. opportunities and challenges. Presented at IFT Chicago Section Supplier Nights Program. Rosemont, IL. November 10.
5. Balasubramaniam, V. M. and C. E. Sizer. 1999. Influence of temperature on the inactivation of bacterial spores during high pressure processing of foods. Research and Development Associates Meeting, Pittsburgh, PA. November 28-31.
6. Balasubramaniam, V. M. and C. E. Sizer. 2000. The Challenge: New Thermal and Nonthermal Technologies to Revolutionize the Food World. Paper presented at International Congress on Engineering and Food (ICEF8), Puebla, MX. April 9-13.
7. Balasubramaniam, V. M. 2000. Food safety and technology graduate educational experience at Illinois Institute of Technology's Moffett Campus. Paper presented at International Congress on Engineering and Food (ICEF8), Puebla, MX. April 9-13.
8. Balasubramaniam, V. M. 2000. Overview of Graduate Programs in Food Safety and Technology and Food Process Engineering at Illinois Institute of Technology. Kraft Open House. Glenview, IL. May 3.
9. Balasubramaniam, V.M. 2001. Importance of considering thermodynamic properties of food materials during high pressure processing of low-acid foods. Paper presented at the High Pressure Processing of Foods Symposium. Food Research and Development Centre St. Hyacinthe, Quebec. March 7.
10. Balasubramaniam, V. M. 2001. High Pressure Processing- Challenges and Opportunities (*invited presentation*). Paper presented at the Nuevos Tiempos XII SIMPOSIUM at Monterrey Campus, in Monterrey, Nuevo León, México. February 21.

11. Balasubramaniam, V.M. and E. Ting. 2001. Standard methods for conducting high pressure processing research. Paper presented at the Institute of Food Technologists Nonthermal Processing Division Workshop, University of Delaware, Newark, Del. March 26-28.
12. Balasubramaniam, V.M. 2003. Heat and mass transfer in food processing. Thermal processing for ready-to-eat meat products, Meat industry short course organized by Ohio State University Extension, Departments of Animal Sciences and Food Science and Technology, Columbus, OH. March 4-6.
13. Balasubramaniam, V.M. 2004. High processing for food safety and quality. Heinz Technical Services and Consumer Products Group, Pittsburgh, PA. October 11.
14. Balasubramaniam, V.M. 2004. Thermal interactions during high pressure processing. Presented at Nonthermal Processing Technologies Workshop co-sponsored by IFT Nonthermal Processing Division/ EFFoST, to International participants from food science and technology background. Sydney, Australia. September 16-17.
15. Balasubramaniam, V.M. 2004. High pressure processing of foods. Invited lecture during introductory food processing class taught by Prof. Mark Morgan, Purdue, West Lafayette, IN. October 26.
16. Balasubramaniam, V.M. 2004. Thermal effects in high pressure processing. *Invited presentation*. Internationalization of Combat Feeding, Symposium on high pressure processing. US Army Combat Feeding Program, Natick, MA. June 8-10.
17. Balasubramaniam, V.M. 2004. High pressure processing of food and biological materials: Opportunities and challenges. Supercritical Fluid Chromatography, Extraction, & Processing Conference. Pittsburgh, PA. August 1-4.
18. Balasubramaniam, V.M. 2005. Thermal behavior of foods during high hydrostatic processing – current status and research opportunities. Presented at Central Food Technological Research Institute Engineer's Forum, Mysore, India, to Indian food Scientists and technologist. Mysore, Karnataka, India. June 20.
19. Balasubramaniam, V.M. 2005. High hydrostatic pressure processing. Current status and research needs. Presented at "Emerging Food Processing Technologies Workshop, From the Lab Bench to the Table," U.S. Department of Agriculture Cooperative State, Research, Education, and Extension Service (USDA CSREES), Washington, DC. May 26-27.
20. Balasubramaniam, V.M. 2005. Food preservation by high pressure processing: Opportunities and challenges. Institute of Food Technologists, Ohio valley section suppliers expo. Sharonville, OH. April 14.
21. Balasubramaniam, V.M. 2006. High-pressure processing. Presented at a session entitled "Responsibilities of Processing Specialists in the Commercialization of Alternative Processing Technologies", Institute for Thermal Processing Specialists, Hilton North Raleigh Hotel Raleigh, NC. October 9-10.
22. Balasubramaniam, V.M. 2006. Emerging processing technologies in developing countries-Opportunities and challenges. Presented at Congreso Internacional de Industria tecnologica alimentaria, Benemerita Universidad Autonoma de Puebla, Puebla, Mexico. August 31-September 2.

23. Balasubramaniam, V.M. 2006. Application of high pressure processing for food pasteurization and sterilization. Presented at IV Congreso Internacional de Ingeniería Bioquímica Morelia, Michoacán México. March 5-7.
24. Balasubramaniam, V.M. 2006. High pressure processing for food safety and quality. Symposium on *Non-Thermal Processing: Food Quality and Chemistry*, 231st ACS National Meeting, Atlanta, GA. March 26-30.
25. Balasubramaniam, V.M., J. Ahn, and A.E. Yousef, Lecturer. 2006. Identification of surrogate microorganisms for high pressure sterilization. Presented at Workshop on applications of novel technologies in food and biotechnology. Co-sponsored by Institute of Food Technologists, Nonthermal Processing Division and European Federation of Food Science and Technology, Cork, Ireland. September 11-13.
26. Balasubramaniam, V.M. 2007. Application of high pressure processing in food science and technology. Presented at Department of Food Science and Technology, Punjab Agricultural University, Ludhiana, Punjab, India. June 19.
27. Balasubramaniam, V.M. 2007. Effect of high pressure processing on microbial inactivation and food constituents. Presented at Workshop on Application of High Pressure in Food Processing. Center for Post Harvest Engineering Technology, Abohar, Punjab, India. June 21.
28. Balasubramaniam, V.M. 2007. High pressure processing of shelf-stable foods. 61st Annual Spring Meeting & Exhibition Research & Development Associates for Military Food & Packaging Systems, Inc Tucson, AZ. April 17-19.
29. Balasubramaniam, V.M. 2008. Preserving foods by high pressure processing. Invited presentation . Physics Autumn Seminar Series, Department of Physics, Miami University Oxford, OH. December 3.
30. Balasubramaniam, V.M. 2008. Basic principles of high pressure processing and its application in sea food processing. Presented at Central Institute of Fisheries Technology, Cochin, India. Dec 9-12.
31. Balasubramaniam, V.M. 2008. Fundamentals of high pressure processing. Presented at Intensive course on Nonthermal processing of food: Fundamentals and application. Co-sponsored by Spanish National Research Council, IFT, EFFOST. Madrid, Spain. November 18.
32. Balasubramaniam, V.M. 2008. Thermal aspects of high pressure processing. Presented at 6th International Food Convention, Mysore, India. December 15-19.
33. Sastry, S.K. and V.M. Balasubramaniam. 2009. Technology for Delivery of Heat Sensitive Nutrients. Presented at Indian Convention of Food Scientists and Technologists. Mysore, India. December 21-23.
34. Balasubramaniam, V.M. 2009. High pressure pasteurization of meat products. Meat and Poultry Marination Short Course, University of Georgia, July 21-24.
35. Balasubramaniam, V.M. 2009. Opportunities and Challenges in Pressure-Assisted Thermal Sterilization of Low-Acid Foods. International forum on emerging food processing technologies. Providing a secure and safe food supply. University of Illinois, Urbana, IL. September 23-25.
36. Balasubramaniam, V.M. 2009. High pressure processing of meat products. 10th

- Annual Thermal Processing of Ready-to-Eat Meat Products Short Course, The Ohio State University, Columbus, OH. March 31-April 2.
37. Balasubramaniam, V.M. 2009. High pressure processing – Overview and state of the art. Presented at 2009 Beijing International Nonthermal Processing Workshop, October 13-15.
 38. Balasubramaniam, V.M. 2009. Opportunities and barriers for commercialization. Presented at School of Food & Biological Engineering, Jiangsu University, Zhenjiang, China. Oct 20.
 39. Balasubramaniam, V.M. 2010. High pressure processing for food safety and health. *How to Deliver Fresh Food Quality via Advanced Processing Technologies*. Davis, CA: UC Davis Extension Short Course. October 26.
 40. Balasubramaniam, V.M. 2010. Emerging Technologies in Food Processing - Advanced Thermal Process. Presented at Institute of Food Technologists, Pre-Annual Meeting Short Course Food Processing & Packaging for Product Developers Chicago, IL. July 15-16.
 41. Balasubramaniam, V.M. 2010. High pressure processing of meat products. Annual Thermal Processing of Ready-to-Eat Meat Products Short Course, The Ohio State University, Columbus, OH. March 31-April 2.
 42. Balasubramaniam, V.M. 2010. Alternative Processing Technologies. OVIFT Annual Symposium, Food safety. Enhancing the Safety of Foods in a Global Market. Columbus, OH. March 11.
 43. Nguyen L.T., Ratphitagsanti W., and V.M. Balasubramaniam. 2010. Development of an integrated process lethality model for pressure-assisted thermal processing. 2010. International Non-thermal Processing Workshop, Montreal, Canada. Montreal, Canada. October 2010.
 44. V.M. Balasubramaniam. 2010. Pressure-Assisted thermal sterilization of shelf-stable foods. ARL Fellows Symposium, High Pressure Science and Technology applicable to Defense,. Aberdeen Proving Ground, MD. October 2010.
 45. Balasubramaniam, V.M. 2011. Pressure-assisted thermal processing of low-acid foods. 2011 Summer Conference of Society for Applied Microbiology (Sfam), Dublin, Ireland. July 05-07.
 46. Balasubramaniam, V.M. 2011. High pressure processing. 11th International Congress on Engineering and Food. Athens, Greece. May 22-26.
 47. Balasubramaniam, V.M. 2011. Pressure-assisted thermal processing. 2011 Nonthermal Processing Workshop, Osnabruck, Germany, October 12-14.
 48. Balasubramaniam, V.M. 2011. Advanced Thermal and Nonthermal Based Technologies for Food Pasteurization and Sterilization. International symposium on food processing. Defense Food Research Laboratory, Mysore, India. Nov 23-25.
 49. Balasubramaniam, V.M. 2012. High Pressure Processing of Meat Products. Thermal Processing of Ready-to-Eat (RTE) Meat Products short course The Ohio State University, Columbus, OH April 17-19.
 50. Balasubramaniam, V.M. 2012. Effects of high pressure processing on quality kinetics. In *Quality Changes in Foods Processed Using Alternative Processing*

- Technologies Pre-Annual Meeting Short Course, Annual Meeting of Institute of Food Technologists, LVH-Las Vegas Hotel and Casino, Las Vegas, NV. June 25.
51. Balasubramaniam, V.M. 2012. Frontiers in Food Preservation Research. College of Agricultural Engineering, Tamil Nadu Agricultural University, Coimbatore, India. July 8
 52. Balasubramaniam, V.M. 2012. Use and Application of High Pressure Processing. 1st Annual Food Safety Midwest Workshop, Fort Wyne, IN. September 13.
 53. Balasubramaniam, V.M. 2012. Food Preservation Methods for Preserving Health-Promoting Food Quality Attributes. Department of Human Nutrition Seminar, The Ohio State University, Columbus, OH. September 21.
 54. Balasubramaniam, V.M. 2012. Frontiers in Food Preservation Research. College of Agricultural Engineering, Tamil Nadu Agricultural University, Coimbatore, India. July 8
 55. Balasubramaniam, V.M. 2012. Advanced Non-thermal Processing in Food Technology (ANPFT) Kusadasi, Turkey. May 7-10.
 56. Balasubramaniam, V.M. 2013. Developing Food Technologies for Preserving Healthy Foods. Indian Institute of Technology, Kharagpur, India. July 26.
 57. V.M. Balasubramaniam. 2013. Novel Processing Technologies for Food Preservation. University of Alberta, Edmonton, Canada. Sept 23.
 58. V.M. Balasubramaniam. 2013. Introduction to 2014 Nonthermal Processing Workshop at The Ohio State University. International Nonthermal Processing workshop. Florianopolis, Brazil.
 59. Balasubramaniam VM. 2014. High pressure processing. Presented at VIII International Congress of Biochemical Engineering. Mazatlán, sinaloa, Mexico. April 9-11.
 60. Balasubramaniam, V.M. 2014. Opportunities and challenges in pressure-assisted thermal sterilization of foods. Presented at 5th OVIFT symposium. Columbus OH. March 17th
 61. Balasubramaniam, V.M. 2014. Application of high pressure processing in the food industry. Indian Institute of Crop Processing Technology, Thanjavur, India. July 2nd.
 62. V.M. Balasubramaniam. 2014. Welcome and Orientation, 2014 International Nonthermal Workshop participants. 2014 International Nonthermal Processing Workshop and Short Course. The Ohio State University, Columbus OH October 21-24.
 63. V.M. Balasubramaniam. 2014. High pressure food processing. 2014 International Nonthermal Processing Workshop and Short Course. The Ohio State University, Columbus OH October 21-24.
 64. Balasubramaniam. V.M. 2015. Application of innovative nonthermal and thermal food processing technologies in the food industry. USDA NIFA Washington, DC. Jan 19 2015.
 65. Balasubramaniam, V.M. 2015. Advanced Thermal and Nonthermal Methods for Food Pasteurization and Sterilization. Thermal Processing of Ready-to-Eat Meat Products Short Course, Nationwide & Ohio Farm Bureau 4-H Center, The Ohio State University, Columbus, OH. April 20-22.

66. Balasubramaniam, V.M. 2015. Process engineering principles in the development and application of high pressure based technologies for the food industry. 12th International Congress on Engineering and Food (ICEF12) Québec City Convention Centre, Québec City, Canada. June 14-18, 2015
67. Balasubramaniam V.M. and Gustavo V. Barbosa-Canovas. 2015. Nonthermal Technologies for Food. 12th International Congress on Engineering and Food (ICEF12) Québec City Convention Centre, Québec City, Canada. June 14-18, 2015
68. Balasubramaniam, V.M. 2015. High pressure processing. Novel processing technologies for enhancing food safety. Process Expo University. 2015 Process Expo The Global Food Equipment and Technology Show. September 19-22, Chicago, IL.
69. Balasubramaniam, V.M. 2015. Engineering Aspects of High Pressure Homogenization of Liquid Foods. 2015 International Nonthermal Processing Workshop, Athens, Greece. Nov 12 and 13.
70. Balasubramaniam, V.M. 2016. Role of high pressure processing in preserving natural food quality attributes: Principles and applications. The first international forum of ultra high pressure processing technology and application. South China University of Technology, Zhuhai, China. Jan 19-20th
71. Balasubramaniam, V.M. 2016. Applications of high pressure homogenization technology. The first international forum of ultra high pressure processing technology and application. South China University of Technology, Zhuhai, China. Jan 19-20th
72. Balasubramaniam, V.M. 2016. Advanced Nonthermal Food Manufacturing Engineering Research: Opportunities and challenges. CIFT 2016 Ohio Food Industry Summit, Powell OH. March 17.
73. Balasubramaniam, V.M. 2016. Advanced Food Manufacturing. Thermal Processing of Ready-to-Eat Meat Products Short Course, Nationwide & Ohio Farm Bureau 4-H Center, The Ohio State University, Columbus, OH. April 20-22.
74. Balasubramaniam, V.M. 2016. High pressure based advanced food manufacturing research at The Ohio State University. U.S. Army Natick Soldier Research, Development and Engineering Center, NATICK, MA. May 16th.
75. Balasubramaniam, V.M. 2016. Nonthermal based advanced food manufacturing research at The Ohio State University. Honorary Symposium for Professor Emeritus Marcus Karel, European Academy of Food Engineering, Samberg Conference Center at MIT, Cambridge, MA. May 16th
76. Balasubramaniam, V.M. 2016. Advanced nonthermal food manufacturing engineering research: Opportunities and challenges. Ohio Food Industry Summit, Center for Innovative Food Technology, South Lewis Center, OH March 17.
77. Balasubramaniam, V.M. 2016. Application of high pressure based technologies in the food industry: Present status and future prospects. Nonthermal Processing Division Lecture. 2016 Annual Meeting of Institute of Food Technologists, Chicago, IL July 16-19.
78. Balasubramaniam, V.M. 2016. High Pressure Homogenization of Beverage Products: Principles and Applications. 2016 Annual Meeting of Institute of Food Technologists, Chicago, IL July 16-19.

79. Balasubramaniam, V.M. 2016. Food manufacturing through application of high pressure. 2016 Conference of Food Engineering, Columbus, OH. Sep 12-14
80. Balasubramaniam, VM. 2016. Food Engineering Research: Strength, Weakness, Opportunity and Threat (SWOT) Analysis-Community Perspective. 2016 Conference of Food Engineering, Columbus, OH. Sep 12-14
81. Balasubramaniam, VM. 2016. Food Engineering Research: Opportunities and Challenges – Panel Introduction. 2016 Conference of Food Engineering, Columbus, OH. Sep 12-14
82. Balasubramaniam, V.M. 2016. Application of high pressure for commercial sterilization of low-acid shelf-stable foods. Institute of Thermal Processing Specialists (IFTPS), Columbus, OH. Sep 15-16.
83. Balasubramaniam, V.M. 2016. High Pressure Homogenization of Beverages– Opportunities and Challenges. 18th World Congress of Food Science and Technology. International Union of Food Science and Technology (IUFOST), Dublin, Ireland. August 21-25th
84. Balasubramaniam, V.M. 2016. Nonthermal technologies for food manufacturing: Opportunity to improve health and wellness through minimally processed foods. Lead Speaker. ETAE 2016 — Emerging Technologies in Agricultural and Food Engineering, Kharagpur, India. Dec 27.
85. Balasubramaniam, V.M. 2017. Clean label food beverages and emulsions by means of processing. 2017 AOCS Annual Meeting. Orlando, FL April 30-May 3rd.
86. Balasubramaniam, V.M. 2017. Advanced food manufacturing. OSU Thermal Processing of Ready-to-Eat Meat Products short course. April 26-April 28th Columbus OH.
87. Balasubramaniam, V.M. 2017. Recent developments in high pressure based technologies for clean process technology development. Symposium on Emerging Application of High Pressure processing. 2017 IFT Annual Meeting, Las Vegas, NV. June 25-28
88. Balasubramaniam, V.M. 2017. Engineering Advances in Combined Nonthermal and Thermal Technologies for Inactivation of microorganisms. 2017 IFT-EFFoST International Nonthermal Processing Workshop, May 24-25 Chicago Marriott Southwest at Burr Ridge, IL, USA
89. Balasubramaniam, V.M. 2017. High Pressure Processing. Nonthermal Processing Short Course. 2017 IFT-EFFoST International Nonthermal Processing Workshop, May 24-25 Chicago Marriott Southwest at Burr Ridge, IL, USA
90. Balasubramaniam, V.M. 2017. Application of high pressure based technologies in the food industry. Validation of Nonthermal Technologies Cornell University International Symposium, Ithaca, NY. Oct 29-30.
91. Balasubramaniam, V.M. 2017. Clean food process development. High pressure processing case study. Department of Engineering in Process and Food, Universiti Putra Malaysia, Nov 10 2017.
92. Balasubramaniam, V.M. 2018. Application of high pressure based technologies in the food industry. ICRAFT'18. Indian Institute of Food Processing, Thanjavur, India. Aug17-19.

93. Balasubramaniam, V.M. 2018. High pressure based clean food manufacturing technologies. Invited Speaker and Panelist. Food Innovation and Engineering (Foodie), Am Inst of Chem Eng. Napa, CA. Dec 2-4.
94. Balasubramaniam, V.M. 2019. Clean label products: Opportunities and challenges using high pressure based technologies. Annual Conference Cold Pressure Council, Chicago, IL. March 26-27, 2019.
95. Balasubramaniam, V.M. 2019. Research advances in clean label products processed by high pressure based technologies. Invited Graduate Seminar Presentation, Department Food Science and Human Nutrition, Feb 8, 2019.
96. Balasubramaniam, V.M. 2019. Research advances in nonthermal technologies for food. Webinar presentation during National Conference on Emerging Techniques in food processing. Indian Institute of Food Processing Technology, Thanjavur, India. June 2019.
97. Balasubramaniam, V.M. 2019. Development and industrial adaptation of high pressure-based food processing technologies. Food Engineering Division Lecture, Institute of Food Technologists, New Orleans, LA June 5.
98. Balasubramaniam, V.M. 2019. High pressure processing. Panel presentation. Symposium on twenty years of advancements in nonthermal food processing technologies, part 2. Institute of Food Technologists, Ne

WEBINARS

1. Balasubramaniam, V.M. 2014. Webinar on Advances in High Pressure Processing: Case Studies in Applications and Commercialization for Food Safety & Defense. April 14, 2014 . IFT, Chicago, IL.
2. Balasubramaniam, V.M. 2015. Shelf Life Extension of Foods with Fresh-like Quality Attributes by High Pressure. USDA NIFA Institute of Food Safety and Nutrition (IFSN) Seminar Series. August 13, 2015. (<http://nifa.usda.gov/resource/institute-food-safety-and-nutrition-ifs-n-seminar-series>)
3. Balasubramaniam, V.M. 2016. Minimal processing technological solutions for extended shelf life foods. Presented as a part of IFT Webinar entitled “Extended Shelf-Life Foods – Ensuring food safety through high pressure based technological solutions” Feb 25. www.ift.org.
4. Balasubramaniam, V.M. 2019. High pressure based technologies for the preservation of fruits and vegetable products. IFT Fruits and Vegetable & Nonthermal Processing Divisions, joint webinar. Feb 7, 2019.
5. Balasubramaniam, V.M. 2019. “Application of high pressure-based technologies in food industry: Opportunities and future prospects” International Society of Food Engineering Monterrey, NL Mexico June 24 2019

RESEARCH WORK CITED IN POPULAR PRESS

Dr. Bala’s research received attention from popular press including the following.

1. Annon. 2001. High pressure processing, Cover story for the January 2001 issue of Food Processing magazine. The feature described some of the research work conducted by Dr. Bala at National Center for Food Safety and Technology. January 2001.
2. Ben Sutherly. 2004. OSU researchers hope their eggs pass muster. Dayton Daily News. November, 16, 2004.
3. Stephanie Bergh. 2005. Researchers creating egg with long shelf-life. Lantern, The Ohio State University, Columbus, OH. April, 01, 2005.
4. Mike Lafferty. 2005. OSU researcher hatching plan for tastier Army egg. The Columbus Dispatch . Appeared under Metro & State. Page C1. March, 14, 2005.
5. Cookson Beecher. 2011. Can High Pressure Technology Make Hamburger Safer?. www.foodsafetynews.com. www.foodsafetynews.com. web. 2.
6. February 22, 2011. <http://www.foodsafetynews.com/2011/02/new-technology-for-safer-tastier-burger-patties>.
7. Maura Keller. 2011. Cool Under Pressure — High-Pressure Food Processing May Offer Benefits Without Need for Heat. Today's Dietitian. Vol. 13.16. Spring City, PA. January, 2011. <http://www.todaysdietitian.com/newarchives/011211p16.shtml>.
8. Beryl Benderly. 2011. Deadly ingredients. PRISM, American Society of Engineering Education, Oct 2011.
9. Freeman, D.H. 2011. The bright, hi-tech future of food preservation. Discover Magazine. October 2011. <http://discovermagazine.com/2011/sep/17-impatient-futurist-hi-tech-future-food-preservation>
10. Rao, R. 2011. High pressure technology. Fresh and safe way to processing. Modern Food Processing. September 2011. Page 95-96. <http://www.mfponline.in/>
11. Herman, J. 2012. Tech Concepts You Need to Know for 2012. Popular Mechanics. January 2012. <http://www.popularmechanics.com/technology/engineering/news/10-tech-concepts-you-need-to-know-for-2012>
12. Anon. 2012. Putting on the Pressure: 'No Heat' Way to Zap Pathogens. Food Safety News. Jan 31, 2012.
13. Alex Orlov. 2014. The Cold-Pressed Truth: What Juice Drinkers Need to Know. Daily Burn. March 10, 2014.
14. Cookson Beecher. 2016. High pressure is rising. Companies of all sizes are taking advantage of the food safety benefits that high-pressure processing brings. Independent Processor. Feb 8, 2016.
15. Renault, Marion. 2017. Ohio a hub for bacteria-killing, high-pressure food processing. Columbus Dispatch, Feb 3, 2017; CantonRep.com. Feb 1, 2017.

RESEARCH CONTRACTS AND GRANTS

Dr. Bala secured approximately \$4,151,002 as principal investigator and \$4,621,786 as a co-investigator during his academic career. US Department of Agriculture, Department of Defense, Mid West Food Processor Association, Center for Advanced Processing and Packaging Studies, food companies are examples of the agencies that supported Dr. Bala's work.

OUTREACH

Dr. Bala has an active industrial outreach program and served as a technical resource for the food industry, Government (USDA, FDA, Department of Defense) and academia on various alternative food processing technologies. He gave invited presentation hosted by various institutions (see section under invited presentations).

Another notable outreach activity is Dr. Bala's involvement with organization of international nonthermal processing workshops since 2002. These annual workshops were co-sponsored by IFT Nonthermal Processing Division and European Federation of Food Science and Technology. The workshops were held at various parts of the world including USA, Australia, China, Canada Germany, Spain, Netherlands, and Ireland. The workshops provide a forum for the researchers from academia, industry, and regulatory sciences to network and discuss common scientific challenges and future research needs to advance various nonthermal processing technologies. The workshops attracted about 60-120 international scientists and engineers each year. The workshops facilitated development of scientific based research in the innovative food processing and industrial implementation of these technologies.

To facilitate the transfer of new processing methods such as high pressure processing from laboratory into commercial practice, he communicated research benefits to the stakeholders (food industry personnel, consumers, legislators and others) through interviews, fact sheets, and pilot plant demonstrations.

INTERNATIONAL NONTHERMAL PROCESSING WORKSHOPS AND SHORT COURSES, CO-SPONSORED BY IFT, AND EFFOST (International Scientific Committee Member, Presenter)

1. High pressure processing workshop. Jointly hosted by IFT, Oregon State Univ and National Center for Food Safety and Tech., Chicago, IL. June 1997.
2. Pulsed electric field workshop, Hosted by Purepulse Technologies, March 1998
3. Workshop on nonthermal food processing, Northwest Food Processor Association, Portland, OR. Jan 2000.
4. Workshop on nonthermal food processing, Univ of Delaware, March 21-22, 2001.
5. Workshop on nonthermal food processing, The Ohio State University, Columbus, OH. September 11-13, 2002.
6. Workshop on nonthermal food processing, Wageningen, Netherlands September 7-

- 10, 2003.
7. Workshop on nonthermal food preservation, Food Science Australia, Sydney, Australia September 16-17, 2004.
 8. Workshop on nonthermal food preservation, USDA-ARS Eastern Regional Research Center, Wyndmoor, PA Sept 14-16, 2005.
 9. Workshop on applications of novel technologies in food, and biotechnology, Cork, Ireland. September 11-13 2006.
 10. Nonthermal processing workshop, Oregon Convention Center, Portland, Oregon. January 13 - 16, 2008.
 11. Nonthermal Processing workshop, Spanish National Research Council, Madrid, Spain. November 19-22, 2008.
 12. Beijing International Conference on Nonthermal Processing Technologies, China Agricultural University, Beijing, China. October 13-15, 2009.
 13. McGill University Montreal Nonthermal Processing workshop. and Short course. Montreal, Canada. October 11-14, 2010.
 14. German Nonthermal Processing Workshop and Short course, Osnabrueck, Germany. October 12-14, 2011
 15. International Nonthermal Processing Workshop and Short course, Food Science Australia, Melbourne, Australia. Oct 16-17, 2012.
 16. International Nonthermal Processing Workshop and Short course, Brazilian Agricultural Research Corporation and Brazil National Service of Industrial Apprenticeship, Florianopolis, Sept 30-Oct 2, 2013.
 17. Local host and chair, 2014 International Nonthermal Processing Workshop and Short Course, The Ohio State University, Columbus Ohio October 21-24
 18. International Nonthermal Processing Workshop and Short course, National Technical University of Athens, Greece, Nov 12-13, 2015
 19. International Nonthermal Processing Workshop and Short course, Institute of Food Safety and Health, Chicago, IL. May 24-25 , 2017
 20. Validation of Nonthermal Technologies Cornell University International Symposium, Ithaca, NY. Oct 29-30.

21. 2019 International Nonthermal Processing Workshop and Short Course, Tecnologico de Monterrey, Mexico. Nov 3-6.

SERVICE

Dr. Bala is currently serving as the chair of CFAES Ag Faculty Council and serves as a member of OARDC Director's Associateship committee. He previously served as the member of OARDC research award committee. Dr. Bala is a member of editorial boards of the International Journal of Food Engineering, Journal of Food Process Engineering and Food and Bioprocess Technology journal. He has been serving as an associate editor for International Journal of Agricultural Engineering.

Dr. Bala is one of the founding members of IFT Nonthermal Processing division and Volunteered his time for variety of positions in the Executive Committee (Vice Chair, Secretary, Technical Program Representative, Member at large Graduate Paper Competition Chair, among others). Currently he has been serving as the division chair. Prof. Bala gave significant international dimension to the nonthermal processing division by promoting NPD/EFoST workshops in Europe, Australia and China. Service activities of Dr. Bala to the university and profession are summarized below.

Illinois Institute of Technology

1. Co-leader, Food Processing Working Group, National Center for Food Safety and Technology (1995-2002)
2. Director, Graduate programs in Food Safety and Technology, Food Process Engineering (1997-2002)
3. Member, Research Council, Graduate School, Illinois Institute of Technology (1999-2001)

The Ohio State University, Columbus, OH

Graduate School, The Ohio State University. University Fellowship Committee Member. 2015-17

University Research Committee, Member. 2014-2016; Vice chair (2015-16)

Faculty Hearing Committee of the University Senate. 2015-present.

College of Food Agricultural and Environmental Sciences, The Ohio State University, Columbus OH

1. Agricultural Faculty Council, Chair (2010-11) Vice Chair (2009-10); Member, Ag Faculty Council, 2008-2011
2. Sustainability Committee (2010-2011)
3. Information Technology Advisory Committee, Member (2011)

Ohio Agricultural Research and Development Center, Wooster, Ohio

1. Faculty Research Awards Committee (2004-05).
2. Director's Associate Fellowship awards selection committee (2008-2010).
3. Distinguished Faculty Research Awards and Krauss Graduate Research Award (2016-2019)

Department of Food Science and Technology, The Ohio State University, Columbus, OH

1. Adviser, Food science and food business major undergraduate students (2004-2010). Advise about 5-10 students every year.
2. Chair, curriculum committee (2004-2005) lead the department efforts in getting Institute of Food Technologists (IFT) approval of the food science and technology curriculum.
3. Chair, Research Committee, Department of Food Science and Technology. Helped to prepare research portion of department strategic plan (2008-2009).
4. Pilot Plant Committee Member (2005-2010).
5. Facilities Committee (2012-present)
6. Graduate Study Committee Member (2007-2010; 2014-2017).
7. Harris Lectureship Award Committee Member (2008-2010).
8. Assistant Professor (Food Engineering) Search Committee Chair (2008-09). Member of Search Committee: Assistant Professor (2005); Faculty lecture (2004).
9. Student recruitment committee (2003-06)
10. Peer-evaluation of teaching (Vadovotz, Pascall, Wang, Klein)
11. Chair, Promotion & Tenure Committee (2011-2013)
12. Executive Committee, Food Science and Technology (2012-2014)
13. Chair, Awards Committee (2019-present)
14. Member, Harris Award committee (2019-present)

National Committee

1. American Society of Agricultural Engineers
 - i. Heat and mass transfer technical committee (FPE-710) 1992-94.
2. NC-1023/136 USDA North central regional committee on improvement of thermal processes and alternative food processes.

- i. Member since 1997-present.
 - ii. Vice Chair (2009-10);
 - iii. Chair (2010-11)
- 3. Defense Logistics Agency, Combat ration network for technology implementation (CORANET) program
 - i. Academic member, 1996-2010
- 4. Reviewer, IFT-FDA document on kinetics of microbial inactivation for alternative food processing technologies.1999.
- 5. USDA/CSREES Peer Review Panel, National Research Initiative Competitive Grants on food characterization, Washington, DC.
 - i. Panel member, 2002 & 2003.
 - ii. Reviewer, Food characterization/value added program. 1999-2003
- 6. Institute of Food Technologists (IFT) - professional society for food scientists and engineers with approximately 28,000 members.
 - i. 2015 Nicholas Appert Award Jury member
 - ii. Annual Meeting Meeting, Annual Meeting Scientific Program Advisory Panel (AMSPAP) Member 2016-2017 (Food Engineering).
 - iii. 2012 Annual Meeting Programming Committee
 - 1. Member. 2011-12
 - 2. Chair, Food Processing Subpanel 2011-12
 - iv. IFT Feeding Tomorrow Scholarship Program
 - 1. Evan Turek Memorial Scholarship Committee (2010-12)

Ohio Valley section

Member at large (2002-05), Alternate counselor (2006-2007) .
Member, Committee on nominations (2007) .

Nonthermal processing division

Chair, Past-chair council (2016-2019)
Chair, Publication Committee (2012-present)
Past-chair (2011-12), Chair (2010-11), Chair-elect (2009-10)
Secretary (2008-09), Member-at-large(1998–2001,2004-07).
Technical publication committee representative, 1999 – 2003.
Graduate paper competition committee, Chair 2003.

Food engineering division.

Chair (2019-present), Secretary (2017-18), Chair-elect (2018-19),
Member-at-large, 2003-2005, 2008-2011

Society of Food Engineering

- Co-organizer, 2016 Conference of Food Engineering, Columbus, Ohio
- Member, Interim Council, Society of Food Engineering, Columbus, Ohio (2017)

Community

1. Judge, Science Fair (Dublin & Central Ohio & State of Ohio science day competitions) (2009-2016)
2. Coach, First Lego League, Dublin Robotics Sells Middle School team (2010-2012)

Professional Membership

1. Editor-In Chief, Journal of Food Process Engineering (Wiley) 2018-present.
2. American Society of Agricultural and Biological Engineering (1990-present)
3. Institute of Food Technologists (1991-present)
4. American Institute of Chemical Engineers (1992-present)
5. International Association of Food Protection (1995-present)

Editorial Board Membership

1. Editor in Chief, Journal of Food Process Engineering, Wiley Nov 2017-present, Editorial board member (2005-2017)
2. Associate Editor, International Journal of Agricultural Engineering, Bangkok, Thailand. 2008-2011
3. Editorial Board, International Journal of Food Engineering, Berkeley Electronic Press. 2004-present.
4. Editorial Board, Processes, MDPI, Switzerland
5. Editorial Board, LWT Food Science and Technology, Elsevier. 2014-2016
6. Editorial Board, Food and Bioprocess Technology, Springer. 2007-present.
7. Editorial Board, International Journal of Food Properties, 2006-present.