

Soojin Jun
College of Tropical Agriculture and Human Resources
Department of Human Nutrition, Food and Animal Sciences
FTE Distribution: 40% I; 60% R; 0% E

Education

<u>Degree</u>	<u>University</u>	<u>Major</u>
PhD	Penn State University	Agricultural & Biological Engineering
MS	Seoul National University	Food Science & Technology
BS	Seoul National University	Food Science & Technology

Professional Positions

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Professor	University of Hawaii	2017 to Present
Interim Dept Chair	University of Hawaii	2022 to 2023
Interim Dept Chair	University of Hawaii	2018 to 2019
Associate Professor	University of Hawaii	2012 to 2017
Assistant Professor	University of Hawaii	2006 to 2012

Courses Taught

<u>Course ID and name (credits)</u>	
FSHN 411	Food Engineering (3)
FSHN 445	Food Quality Control (3)
FSHN 460	Food Process Operations (3)
FSHN 608	Advanced Food Science II (3)

Publications

Books

Jun, S. and Irudayaraj, J. (Editors) 2008. *Food Processing Operations and Modeling: Design and Analysis*, 2nd edition. CRC/Taylor & Francis, NY (355 pages) [80%]

Book Chapters

1. Kang, T., **Jun, S.**, 2021. 1.42 Fundamentals of Ohmic Processing: Modeling and Commercial Applications. In: Knoerzer, K., Muthukumarappan, K. (Eds.), *Innovative Food Processing Technologies: A Comprehensive Review*, Vol. 1. Elsevier, pp. 689–698. <https://doi.org/B978-0-12-815781-7.00004-4>.
2. Rungraeng, N., & **Jun, S.** 2013. Carbon nanotubes-polytetrafluoroethylene nanocomposite coatings. Chapter 3, In Mittal, V. (Ed.). *Polymer Nanocomposite Coating*. CRC Press. Boca Raton, FL. [30%]
3. Ramaswamy, R., Krishnamurthy, K., and **Jun, S.** 2011. Food Decontamination by Infrared Heating, In: A. Demirci & M. Ngadi, ed. *Microbial Decontamination in the Food Industry: Novel Methods and Applications*, Woodhead Publishing [20%]
4. **Jun, S.**, Krishnamurthy, K., Irudayaraj, J. and Demirci, A. 2010. Chapter 1, Fundamentals and theory of infrared radiation, In: Z. Pan, ed. *Infrared Heating for Food and Agricultural Processing*, CRC/Taylor & Francis pp 1-17 [60%]
5. Krishnamurthy, K., **Jun, S.**, Irudayaraj, J., and Demirci, A. 2010. Chapter 11, Food Safety Improvement, In: Z. Pan, ed. *Infrared Heating for Food and Agricultural Processing*, CRC/Taylor & Francis pp 225-235 [25%]
6. Krishnamurthy, K., Khurana, H.K., **Jun, S.**, Irudayaraj, J., and Demirci, A. 2008. Chapter 5, Infrared Radiation for Food Processing, In: *Food Processing Operations and Modeling: Design and Analysis*, CRC/Taylor & Francis [25%]
7. **Jun, S.** and Sastry, S.K. 2008. Chapter 6, Modeling of Ohmic Heating of Foods, In: *Food Processing Operations and Modeling: Design and Analysis*, CRC/Taylor & Francis [80%]
8. Balasubramanian, S., Puri, V.M., and **Jun, S.** 2008. Chapter 9, Fouling Model for Heat Exchangers, In: *Food Processing Operations and Modeling: Design and Analysis*, CRC/Taylor & Francis [25%]
9. Pandit, R.B., Somavat, R., **Jun, S.**, Heskitt, B., and Sastry, S.K. 2007. Development of a Light Weight Ohmic Food Warming Unit for a Mars Exploration Vehicle. *World of Food Science*. Volume 2: Food and Space pp. 1-15

[20%]

10. **Jun, S.** and Puri, V.M. 2006. Chapter 17 - Plate Heat Exchanger: Thermal and Fouling Analysis, In: Da-Wen Sun, ed. *Computational Fluid Dynamics in Food Processing*, CRC Press, pp 417-431 [70%]
11. **Jun, S.**, Yu, C., and Irudayaraj, J. 2006. Food Processing Methods, In: K.C. Ting, D. H. Fleisher, & L. F. Rodriguez, ed. *Systems Analysis and Modeling in Food and Agriculture*, Encyclopedia of Life Support Systems (EOLSS) [40%]

Refereed Journal Publications

1. Kang, T., Lee, D., & **Jun, S.** 2025. An exterior chamber developed to explore oscillating magnetic field effects on supercooling of water. *Journal of Food Process Engineering* (In Submission) [30%]
2. Her, J.Y., Kang, T., So, H., and Jun, S. 2025. Extension of the supercooled state within strawberry using the combination of pulsed electric field (PEF) and oscillating magnetic field (OMF). *Applied Engineering in Agriculture* (In Review) [30%]
3. Lee, I., So, H., Ho, K.H.Y., Li, Y., and **Jun, S.** 2025. Flow-based dielectrophoretic biosensor for detection of bacteriophage MS2 as a foodborne virus surrogate. *Biosensors* (In Submission) [30%]
4. So, H., Lee, D. Y. and **Jun, S.** 2025. Application of Oscillating Magnetic Field-Based Supercooling Treatment for Solid Lipid Nanoparticles. *Transaction of the ASABE* (Accepted) [30%]
5. Joya, A., Lee, D., Kang, T., Wall, M. M. and **Jun, S.** 2025. Effect of oscillating magnetic field (OMF) on the supercooling behavior of iron-oxide nanoparticle (IONP) agar model system. *Journal of Food Science* <https://doi.org/10.1111/1750-3841.17653> [30%]
6. An, S., Oh, G., Lee D.Y., Baek K., and **Jun, S.** 2024. Predicting Physicochemical Properties of Papayas (Carica papaya L.) using a Convolutional Neural Networks (CNN) Model Approach. *Journal of Food Science* <http://doi.org/10.1111/1750-3841.17462> [30%]
7. Lee, D.Y., Tang, J., Lee, S.H. and **Jun, S.** 2024. Effect of Oscillating Magnetic Field (OMF) and Pulsed Electric Field (PEF) on Supercooling Preservation of Atlantic Salmon (*Salmo salar* L.) Fillets. *Foods* <https://doi.org/10.3390/foods13162525> [30%]
8. Joe, S. Y., So, J.H., Oh, S.E., **Jun, S.** and Lee, S.H. 2024. Development of cracked-egg detection device using electric discharge phenomenon. *Foods* 13(18) 2989 <https://doi.org/10.3390/foods13182989> [20%]
9. Lee, D.Y., You, Y., Wall, M.M., Ho, K.H.Y., Li, Y., and **Jun, S.** 2023. Impact of supercooling storage on the physical and chemical properties of yellowfin tuna (*Thunnus albacares*). *Journal of Food Engineering* <https://doi.org/10.1016/j.jfoodeng.2023.111818> [30%]
10. Lee, I., So, H., Ho, K.H.Y., Li, Y., and **Jun, S.** 2023. Flow-based dielectrophoretic biosensor for detection of bacteriophage MS2 as a foodborne virus surrogate. *Plos One* (In Submission) [30%]
11. Pereira, G., **Jun, S.**, Li, Q., Wall, M., and Ho, K. 2023. Formation and physical characterization of soy protein-isoflavone dispersions and emulsions. *LWT*. 176. 114513. 10.1016/j.lwt.2023.114513. [20%]
12. Lee I., So H., Kim J., Auh J-H, Wall M.M., Li Y., Ho K., and **Jun S.** 2023. Selective Detection of Escherichia coli K12 and Staphylococcus aureus in Mixed Bacterial Communities Using a Single-Walled Carbon Nanotube (SWCNT)-Functionalized Electrochemical Immunosensor with Dielectrophoretic Concentration. *Nanomaterials*. 13(6): 985. <https://doi.org/10.3390/nano13060985> [40%]
13. Seo, Y., Hong, E., Lee, J., Jeong, Y., Seo, B., **Jun, S.**, Lee, S., and Choi, W. 2022. Comparative study of coating agents for prevention of fine-dust-induced light transmittance reduction in greenhouse covering materials. *Journal of Agricultural Engineering*. 53. 10.4081/jae.2022.1334 [20%]
14. Jung, A. H., Hwang, J. H., **Jun, S.**, and Park, S. H. 2022. Application of ohmic cooking to produce a soy protein-based meat analogue. *LWT* <https://doi.org/10.1016/j.lwt.2022.113271> [15%]
15. Lee, B.E., Kang, T., Jenkins, D., Li, Y., Wall, M.M., and **Jun, S.** 2022. A single walled carbon nanotubes (SWCNTs)-based electrochemical impedance immunosensor for on-site detection of listeria monocytogenes. *Journal of Food Science* 87(1):280-288 doi: 10.1111/1750-3841.15996 [30%]
16. Kang, T. Lee, D., Ko, Y., and **Jun, S.** 2022. Effects of pulsed electric field (PEF) and oscillating magnetic field (OMF) on supercooling preservation of beef at different fat levels. *International Journal of Refrigeration* 136: 36-45 <https://doi.org/10.1016/j.ijrefrig.2022.01.004> [30%]
17. Modzelewska-Kapituła, M. and **Jun, S.** 2022. The application of computer vision systems in meat science and industry—A review. *Meat Science*, p.108904. [20%]
18. So, J., Joe, S.Y., Hwang, S.H., **Jun, S.**, and Lee, S.H. 2021. Analysis of the temperature distribution in the refrigerated truck body depending on the box loading patterns. *Foods* 10.3390/foods10112560 [10%]
19. You, Y., Muci, L., Kang, T., Ko, Y., Kim, S. Lee, S., and **Jun, S.** 2021. Application of supercooling for enhanced

- shelf life of asparagus (*Asparagus officinalis*, L.). *Foods* 10.3390/foods10102361 [30%]
20. Kang, T. You, Y., Hoptowit, R., Wall, M.M., and **Jun, S.** 2021. Effect of an oscillating magnetic field on the inhibition of ice nucleation and its application for supercooling preservation of fresh-cut mango slices. *Journal of Food Engineering* <https://doi.org/10.1016/j.jfoodeng.2021.110541> [40%]
 21. Kang, T., Shafel, T., Lee, D., Lee, C.J., Lee, S.H., and **Jun, S.** 2020. Quality retention of fresh tuna stored using the supercooling technology. *Foods* 9(10): 1356; <https://doi.org/10.3390/foods9101356> [40%]
 22. Kang, T. Hoptowit, R., and **Jun, S.** 2020. Effects of an oscillating magnetic field on ice nucleation in aqueous iron-oxide nanoparticle dispersions during supercooling and preservation of beef as a food application. *Journal of Food Process Engineering* <https://doi.org/10.1111/jfpe.13525> [30%]
 23. Ban, G., Li, Y., Wall, M.M., and **Jun, S.** 2020. Nano-engineered stainless steel surface to combat bacterial attachment and biofilm formation. *Foods* 9(11), 1518; <https://doi.org/10.3390/foods9111518>. [30%]
 24. Lee, B. E., You, Y., Choi, W., Hong, E., Wall, M. M. and **Jun, S.** 2020. Nanoengineered superhydrophobic surfaces to prevent the adhesion of *Listeria monocytogenes* for improved food safety. *Transaction of the ASABE* 63(5): 1401-1407 [30%]
 25. Kang, T., You, Y., and **Jun, S.** 2020. Supercooling preservation technology in food and biological samples: A review focused on electric and magnetic field applications. *Food Science and Biotechnology* 29: 303–321 [30%]
 26. Choi W., Min, Y. W., Lee, K. Y., **Jun, S.** and Lee H. G. 2020. Dielectrophoresis-based microwire biosensor for rapid detection of *Escherichia coli* K-12 in ground beef. *LWT - Food Science and Technology* <https://doi.org/10.1016/j.lwt.2020.109230> [10%]
 27. You, Y., Kang, T., and **Jun, S.** 2020. Control of Ice Nucleation for Subzero Food Preservation. *Food Engineering Reviews* <https://doi.org/10.1007/s12393-020-09211-6> [30%]
 28. You, Y., Her, J.Y., Shafel, T., Kang, T. and **Jun, S.** 2020. Supercooling Preservation on Quality of Beef Steak. *Journal of Food Engineering* 274, 109840 <https://doi.org/10.1016/j.jfoodeng.2019.109840> [30%]
 29. Kang, T., Her, J., Hoptowit, R., and **Jun, S.** 2019. Investigation of the effect of oscillating magnetic field on fresh-cut pineapple and agar gel as a model food during supercooling preservation. *Transaction of the ASABE* 62(5):1155-1161 [30%]
 30. Lee, J., Jiang, Y., Ban, G.H., Hizal, F., **Jun, S.**, and Choi, C. 2019. Durable Omniphobicity of Oil-Impregnated Anodic Aluminum Oxide Nanostructured Surfaces. *Journal of Colloid and Interface Science* 553: 734-745. [10%]
 31. Jenkins, D.M., Lee B.E., **Jun, S.**, Reyes-De-Corcuera, J., and Eric S. McLamore. 2019. ABE-Stat, a Fully Open-Source and Versatile Wireless Potentiostat Project Including Electrochemical Impedance Spectroscopy. *Journal of The Electrochemical Society* 166 (9) B3056-B3065. [10%]
 32. Her, J.Y., Kang, T., Hoptowit, R., and **Jun, S.** 2019. Supercooling of fresh-cut honeydew melon: Oscillating magnetic field (OMF) effect. *Transaction of the ASABE* 62(3): 779-785. [30%]
 33. Ban, G., Rungraeng, N., Li, Y. and **Jun, S.** 2018. Nanoporous stainless steel surfaces for anti-bacterial adhesion performances. *Trans of ASABE* 61(3): 1-5. [30%]
 34. Hizal, F., Rungraeng, N., Lee, J., **Jun, S.**, Busscher, H., van der Mei, H.C., and Choi, C. 2017. Nanoengineered Superhydrophobic Surfaces of Aluminum with Extremely Low Bacterial Adhesivity. *ACS Applied Materials & Interfaces* 9(13): 12118-12129. [10%]
 35. Ban, G.H., Lee, J., Choi, C., and **Jun, S.** 2017. Nano-patterned aluminum surface with oil-impregnation for the improved antibacterial performance *LWT – Food Science and Technology* 84: 359-363 [30%]
 36. Cebricos, J., Hoptowit, R., and **Jun, S.** 2017. Separation of *Escherichia coli* K12 from contaminated tap water using a single-stage, continuous flow dielectrophoresis (DEP) device. *LWT – Food Science and Technology* 80: 185-192 [40%]
 37. Lee S.H., Park, J. G., Lee, D. Y., Kandpal, L. M., Cho, B., Hong, S., and **Jun, S.** 2016. Drying Characteristics of Agricultural Products under Different Drying Methods: A Review. *Journal of Biosystems Engineering* 41(4): 389-395 [20%]
 38. Mok, J.H., Her J., Kang T., Hoptowit, R., and **Jun, S.** 2016. Effects of pulsed electric field (PEF) and oscillating magnetic field (OMF) combination technology on the extension of supercooling for chicken breasts. *Journal of Food Engineering* 196: 27-35 [50%]
 39. Lee, I. and **Jun, S.** 2016. Simultaneous detection of *E. coli* K12 and *S. aureus* using a Continuous Flow Multijunction Biosensor. *Journal of Food Science* 81(6): N1530-6 [50%]
 40. Choi, W., Abdullah, S., Lee, S.H., and **Jun, S.** 2016. Mathematical Modeling and Numerical Simulation for Predictive Retention of Antioxidant Activity of Grape Juice Pasteurized with Continuous Flow Ohmic Heating. *Transaction of the ASABE* 59(3): 1049-1059 [50%]
 41. Lee, S.H. and **Jun, S.** 2016. Conventional and Emerging Combination Technologies for Food Processing. *Food Engineering Review* 8(4): 414-434 [50%]

42. Yamada, K., Choi W., Lee, I., Cho, B., and **Jun, S.** 2015. Rapid detection of multiple foodborne pathogens using a nanoparticle-functionalized multi-junction biosensor. *Biosensors and Bioelectronics* 77:137 - 143 [50%]
43. Mok, J.H., Choi, W., Park, S.H., Lee, S.H., and **Jun, S.** 2015. Emerging pulsed electric field (PEF) and static magnetic field (SMF) combination technology for food freezing. *International Journal of Refrigeration* 50: 137-145 [50%]
44. Choi, W., Lee, S.H., Kim, C., and **Jun, S.** 2015. A finite element method based flow and heat transfer model of continuous flow microwave and ohmic combination heating for particulate foods. *Journal of Food Engineering* 149: 159-170 [60%]
45. Lee, S.H., Choi, W., Kim, J., and **Jun, S.** 2015. Development of a dual cylindrical microwave and ohmic combination heater for minimization of thermal lags in the processing of particulate foods. *LWT- Food Science and Technology* 63(2): 1220-1228 [60%]
46. Shafel, T., Lee, S.H., and **Jun, S.** 2015. Food preservation technology at subzero temperatures: A review. *Journal of Biosystems Engineering* 40(3): 261-270 [60%]
47. Lee, S.H., Choi, W., Park, S.H., and **Jun, S.** 2015. Design and Fabrication of a Dual Cylindrical Microwave and Ohmic Combination Heater for Processing of Particulate Foods. *Journal of Biosystems Engineering* 40(3): 250-260 [50%]
48. Park, S.H. and **Jun, S.** 2015. Practical estimation of in situ physical properties of foods under high pressure. *Food Science and Biotechnology* 24(3): 777-782 [40%]
49. Chee, G., Shafel, T., Park, S.H., and **Jun, S.** 2015. Pulsed-CO₂ Laser Beam Photothermal Technology Combined with Conjugated Gold Nanoparticles for the Selective Elimination of Surface *E. coli* K12 from Fresh Fruits. *Journal of Food Process Engineering* 38(5): 437-444 [60%]
50. Yamada, K., Kim, C., Kim, J., Chung, J., Lee, H.G., and **Jun, S.** 2014. Single Walled Carbon Nanotube-Based Junction Biosensor for Detection of *Escherichia coli*. *Plos One* 9(9): e105767
<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0105767> [50%]
51. Rungraeng, N., Yoon, S.H., and **Jun, S.** 2014. Development of a Self-Slippery Liquid-Infused Porous Surface (SLIPS) Coating Using Carbon Nanotube Composite for Repelling Food Debris and Microbial Biofilms. *Transactions in the ASABE* 58(3): 861-867 [60%]
52. Chee, G., Rungraeng, N., Han, J.H., and **Jun, S.** 2014. Electrochemical impedance spectroscopy as an alternative to determine dielectric constant of potatoes at various moisture contents. *Journal of Food Science* 79(2): E195-201 [50%]
53. Yoon, S.H., Rungraeng, N., Song, W., and **Jun, S.** 2014. Superhydrophobic and superhydrophilic nanocomposite coatings for preventing bacterial adhesion on food contact surface. *Journal of Food Engineering* 131: 135-141 [50%]
54. Lee, S.H., Yamada, K., and **Jun, S.** 2013. Ultraviolet Radiation Assisted with Ohmic Current for Microbial Inactivation in Apple Juice. *Transactions of the ASABE* 56(3): 1085-1091 [60%]
55. Abdullah, S., Lee, S.H., Cho, I., Choi, W., and **Jun, S.** 2013. Pasteurization of Kava Juice using Novel Continuous Flow Microwave Heating Technique. *Food Science and Biotechnology* 22(4): 961-966 [50%]
56. Choi, W and **Jun, S.** 2013. Measurement of structural shrinkages of freeze dried chipping potatoes for crack modeling. *Food Science and Biotechnology* 22(4): 967-972 [70%]
57. Nguyen, L.T., Choi W., Lee, S.H., and **Jun, S.** 2013. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. *Journal of Food Engineering* 116(1): 65-71 [60%]
58. Lu, L. Chee, G., Yamada, K., and **Jun, S.** 2013. Electrochemical impedance spectroscopic technique with a functionalized microwire sensor for rapid detection of foodborne pathogens. *Biosensors and Bioelectronics* 42: 492-495 [60%]
59. Choi, W., **Jun, S.**, Nguyen, L.T., Rungraeng, N., Yi, H., Balasubramanian, S., Puri, V.M., and Lee, J. 2013. 3-D Milk Fouling Modeling of Plate Heat Exchangers with Different Surface Finishes using Computational Fluid Dynamics Codes. *Journal of Food Process Engineering* 36(4): 439-449 [30%]
60. Puligundla, P., Abdullah, S.A., Choi, W., **Jun, S.**, Oh, S., and Ko, S. 2013. Potentials of Microwave Heating Technology for Select Food Processing Applications - a Brief Overview and Update. *Journal of Food Processing Technology* 4: 278.
61. Lu, L. and **Jun, S.** 2012. Evaluation of a microwire sensor functionalized to detect *Escherichia coli* bacterial cells. *Biosensors and Bioelectronics* 36(1): 257-261 [70%]
62. Rungraeng, N., Cho, Y., Yoon, S., and **Jun, S.** 2012. Carbon nanotube-polytetrafluoroethylene nanocomposite coating for milk fouling reduction in plate heat exchanger. *Journal of Food Engineering* 111(2): 218-224 [60 %]
63. Choi, W., Nguyen, L.T., Lee, S.H., and **Jun, S.** 2011. A Microwave and Ohmic Combination Heater for Uniform

Heating of Liquid-Particle Food Mixture. *Journal of Food Science* 76(9): E576–E585 [60%]

64. Kim, S., Lu, L., Chung, J., Lee, K.H., Li, Y., and **Jun, S.** 2011. A Microwire Sensor for Rapid Detection of *Escherichia coli* K-12 in Fresh Produce. *Innovative Food Science and Emerging Technologies* 12(4): 617-622 [60%]
65. Lee, S.H. and **Jun, S.** 2011. Enhancement of Sugar Release from Taro Waster using Ohmic Heating and Microwave Heating Techniques. *Transactions of the ASABE* 54(3): 1041-1047 [70%]
66. Cho, I.K., Kim, S.K., Khurana, H.K., Li, Q.X., and Jun, S. 2011. Quantification of Trans Fatty Acids Content in French Fries of Local Food Services using Attenuated Total Reflection-Fourier Transform Infrared Spectroscopy. *Food Chemistry* 125(3): 1121-1125 [60%]
67. Wang, J., Kim, S., Kim, K.H., Kim, Y., Li, Q.X., and **Jun, S.** 2010. Simple Quantitative analysis of *Escherichia coli* K-12 internalized in Baby Spinach using Fourier-Transform Infrared Spectroscopy. *International Journal of Food Microbiology* 144(1): 147-151 [50%]
68. Wang, J., Kliks, M.M., **Jun, S.**, and Li, Q.X. 2010. Residues of Organochlorine Pesticides in Honeys from Different Geographic Regions. *Food Research International* 43: 2329-2334 [20%]
69. Wang, J., Kliks, M., **Jun, S.**, and Li, Q.X. 2010. Residues of Polybrominated Diphenyl Ethers in Honeys from Different Geographic Regions. *Journal of Agricultural and Food Chemistry* 58(6): 3495-3501 [20%]
70. Wang, J., Qu, W.Y., **Jun, S.**, Bittenbender, H.C., and Li, Q.X. 2010. Rapid Determination of Six Kavalactones in Kava Root and Stem Samples using Fourier Transform Infrared Spectroscopy and Multivariate Analysis in Comparison with Gas Chromatography. *Analytical Methods* 2: 492-498 [30%]
71. Shim J.Y., Lee, S.H., and **Jun, S.** 2010. Modeling of Ohmic Heating Patterns of Multiphase Food Products using Computational Fluid Dynamics Codes. *Journal of Food Engineering* 99(2): 136-141 [70%]
72. Wang, J., Kliks, M., **Jun, S.**, Jackson, M., and Li, Q.X. 2010. Rapid Analysis of Glucose, Fructose, Sucrose, and Maltose in Honeys with Different Floral Sources and Geographical Regions using Fourier Transform Infrared Spectroscopy and Multivariate Analysis. *Journal of Food Science* 75(2): C208-214 [40%]
73. Sastry, S.K., **Jun, S.**, Somavat, R., Samaranayake, C., Yousef, A., and Pandita, R.B. 2009. Heating and Sterilization Technology for Long-duration Space Missions Transport Processes in a Reusable Package, Interdisciplinary Transport Phenomena: *Ann. N.Y. Acad. Sci.* 1161: 562–569 [20%]
74. Wang, J., Kliks, M., Qu, W., **Jun, S.**, Shi, G., and Li, Q.X. 2009. Rapid Determination of the Geographical Origin of Honey based on Protein Fingerprinting and Barcoding Using MALDI TOF MS. *Journal of Agricultural and Food Chemistry* 57: 10081-10088 [25%]
75. Wang, J., **Jun, S.**, and Li, Q.X. 2009. Rapid Analysis of Melamine Content in Powdered and Liquid Milk using Fourier Transform Infrared Spectroscopy. *Food Science and Biotechnology* 18(5): 1199-1203 [60%]
76. Wang, J., **Jun, S.**, Bittenbender, H.C., Gautz, L., and Li, Q.X. 2009. Fourier Transform Infrared Spectroscopy for Kona Coffee Authentication. *Journal of Food Science* 74(5): C385-C391 [60%]
77. Krishnamurthy, K., **Jun, S.**, Irudayaraj, J., and Demirci, A. 2008. Efficacy of Infrared Heat Treatment for Inactivation of *Staphylococcus aureus* in Milk. *Journal of Food Process Engineering* 31(6): 798-816 [40%]
78. Khurana, H.K., **Jun, S.**, Cho, I.K., and Li, Q.X. 2008. Rapid Determination of Sugars in Commercial Fruit Yogurts and Yogurt Drinks using Fourier Transform Infrared Spectroscopy and Multivariate Analysis. *Applied Agriculture in Engineering* 24(5): 631-636 [60%]
79. Khurana, H.K., Shim, J.Y., **Jun, S.**, Cho, I.K., and Li, Q.X. 2008. Attenuated Total Reflectance Fourier Transform Infrared Spectroscopy coupled with Multivariate Analysis for Measurement of Acesulfame-K in Diet Foods. *Journal of Food Science* 73(5): c426-c431 [60%]
80. Khurana, H.K., Cho, I.K., **Jun, S.**, Shim, J.Y., and Li, Q.X. 2008. Application of Multi Bounce Attenuated Total Reflectance Fourier Transform Infrared Spectroscopy and Chemometrics for Rapid Determination of Aspartame in Soft Drinks. *Journal of Agriculture and Food Chemistry* 56:778-789 [70%]
81. Krishnamurthy, K., Khurana, H.K., **Jun, S.**, Irudayaraj, J., and Demirci, A. 2008. Infrared Heating in Food Processing: An Overview. *Comprehensive Reviews in Food Science and Food Safety* 7(1):2-13 [60%]
82. **Jun, S.**, Sastry, S.K., and Samaranayake, C. 2007. Migration of Electrode Components during Ohmic Heating of Foods in Retort Pouches. *Innovative Food Science and Emerging Technologies* 8(2): 237-243 [80%]
83. **Jun, S.** and Sastry, S.K. 2007. Reusable Pouch Development for Long Term Space Mission: 3D Ohmic Model for Verification of Sterility Efficacy. *Journal of Food Engineering* 80(4): 1199-1205 [80%]
84. **Jun, S.** and Puri, V.M. 2006. A 2D Dynamic Model for Fouling Performance of Plate Heat Exchangers. *Journal of Food Engineering* 75:364-374 [80%]
85. **Jun, S.**, Puri, V.M. and Chun J.K. 2006. Potential Milk Fouling Area in Plate Heat Exchangers. *Food Engineering Progress* 10(1): 6-13 [80%]
86. **Jun, S.** and Sastry, S.K. 2005. Modeling and Optimizing of Pulsed Ohmic Heating of Foods inside the Flexible

- Package. *Journal of Food Process Engineering* 28: 417-436 [80%]
87. **Jun, S.** and Puri, V.M. 2005. 3D Fouling Model of Plate Heat Exchangers using Computational Fluid Dynamics. *International Journal of Dairy Technology* 58(4):214-224 [80%]
 88. **Jun, S.** and Puri, V.M. 2005. Fouling Model for Heat Exchangers in Food Processing: A Review. *Journal of Food Process Engineering* 28: 1-34 [80%]
 89. **Jun, S.** and Puri, V.M. 2004. Development of Interactive Computational Model of Temperature and Moisture Distributions of Microwaved Foods. *Applied Engineering in Agriculture* 20(5): 677-682 [80%]
 90. **Jun, S.** and Irudayaraj, J. 2004. Explore the Mechanism of Selective Infrared Heating on Disinfection of Fungal Spores. *Applied Engineering in Agriculture* 20(4): 481-485 [80%]
 91. **Jun, S.**, Puri, V.M., and Roberts, R.F. 2003. A Dynamic Model for Thermal Performance of Plate Heat Exchangers. *Transactions of the ASAE* 47(1): 213-222 [70%]
 92. **Jun, S.** and Irudayaraj, J. 2003. Selective Far Infrared Heating System - Design and Evaluation (Part I). *Journal of Drying Technology* 21(1):51-67 [80%]
 93. **Jun, S.** and Irudayaraj, J. 2003. Selective Far Infrared Heating - Spectral Manipulation (Part II). *Journal of Drying Technology* 21(1):69-82 [80%]
 94. **Jun, S.** and Irudayaraj, J. 2003. A Dynamic Fungal Inactivation Approach using Selective Infrared Heating. *Transactions of the ASAE* 46(5):1407-1412 [80%]
 95. **Jun, S.**, Irudayaraj, J., Demirci, A., and Geiser, D. 2003. Pulsed UV-light Treatment of Corn meal for Inactivation of *Aspergillus niger* Spores. *International Journal of Food Science and Technology* 38:1-6 [70%]
 96. Ranjan, R., Irudayaraj, J., and **Jun, S.** 2002. Simulation of Infrared Drying Process. *Journal of Drying Technology* 20(2):363-379 [30%]
 97. Ranjan, R., Irudayaraj, J., and **Jun, S.** 2002. Simulation of Three-Dimensional Infrared Drying using a set of Three-coupled Equations by the Control Volume method. *Transactions of the ASAE* 45(5): 1661-1668 [30%]
 98. Ranjan, R., Irudayaraj, J., and **Jun, S.** 2001. A Three-Dimensional Control Volume Approach to Modeling Heat and Mass Transfer in Foods Materials. *Transactions of the ASAE* 44(6): 1975-1982 [30%]
 99. **Jun, S.** and Chun J.K. 1998. Design of U-column Microwave-Assisted Extraction System and its Application to Pigment Extraction from Food. *Food and Bioproducts Processing* 76 (C4): 231-236 [80%]
 100. **Jun, S.**, Moon, T.W., and Chun, J.K. 1998. Flow Characteristics in Packed bed of Cape Jasmine powders in U-column Microwave Assisted Extraction System. *Food Engineering Progress* 2(1): 55-62 [70%]

Extension Publications

1. **Jun, S.**, Cox, L.J., and Huang, A. 2006. Using the flexible retort pouch to add value to agricultural products. Cooperative Extension Service, CTAHR, University of Hawaii at Manoa, Food Safety and Technology, FST-18, 6 pp. June.

Patents

1. U.S. Patent No. 9,259,121, Ohmic Heating Packet. Awarded on February 16, 2016
2. Provisional 61829994, Hybrid microwave and ohmic combination technology for thermal uniformity of particulate foods. Provisional patent application filed on May 31, 2013
3. U.S. Patent No. 10,111,452, Method of Supercooling Perishable Materials. Awarded on October 30, 2018
4. Japan Patent No. JP6545171B2 Supercooling method of perishable material, Awarded on July 17, 2019
5. Korea Patent No. KR102025978B1 Method of supercooling perishable materials, Awarded on September 26, 2019
6. U.S. Patent No.10,588,336, Method of Supercooling Perishable Materials, Continuation-In-Part application (CIP), Awarded on March 17, 2020.
7. UK patent No. GB2535420, Method of supercooling perishable materials, Awarded on August 4, 2020.

Leadership Roles (Committees, Boards, Advisory, etc.)

Engagement/Technology transfer/Service

Industrial Interactions

1. Nomadics, Inc. (Oklahoma City, OK) 2008
 - *E. coli* quantification using the surface plasmon resonance (SPR) biosensor
 - Research equipment evaluation
2. Hawaiian Host, Inc. 2007 – Present
 - Field trips for FSHN 411 and 460

3. Hanalei Taro & Juice Co. 2008 – Present
 - Taro skin wastes for Bioethanol production
4. NanoFactory, Inc. (Ann Arbor, MI) 2008
 - Design of nanowire sensor for microbial detection
5. Nanolab, Inc. (Newton, MA) 2007
 - Development of carbon nanotube coating technique
6. Reichert, Inc. (Depew, NY) 2007
 - Biosensor development
7. OmegaPiezo Technologies, Inc. (State College, PA) 2007
 - Design of SPR biosensor with carbon nanotube platform
8. Sensient Flavors LLC (Indianapolis, IN) 2010
 - Tropical flavor development
9. CJ CheilJedang Corporation (Seoul, South Korea) 2010 - Present
 - Ohmic heating
10. LG Electronics (Seoul, South Korea) 2012 - Present
 - Food freezing and supercooling
11. Samsung Electronics (Seoul, South Korea) 2014 - Present
 - Food freezing and supercooling
12. Oceanit (Honolulu) 2010 - Present
 - Multi-microwire biosensors
13. Haier Electronics (Qingdao, China) 2017 – Present
 - Food freezing and supercooling

Journal Review (~10 review requests per year)

1. Food and Bioprocess Technology
2. Colloids and Surfaces B: Biointerfaces
3. Journal of Agricultural and Food Chemistry
4. Journal of Food Engineering
5. Appetite
6. Journal of Food Process Engineering
7. International Journal of Food Science and Technology
8. Food Science and Biotechnology
9. Journal of Food Science
10. Innovative Food Science and Emerging Technologies
11. Food Chemistry
12. Biosensor and Bioelectronics
13. International Journal of Biological Macromolecules
14. International Journal of Agricultural and Biological Engineering

Services to the Department

1. Interim Department (2018- 2019)
2. Chair on HNFAS Curriculum Committee (2016 – 2018)
3. Acting Chairs (3-4 times annually)
4. Food Science Undergraduate Option Advisor (2012 - Present)
5. FSHN Curriculum Committee (2010 – 2017)
6. Intercollege Nutrition PhD Executive Committee (2014)
7. FSHN Council Advisor (2006 – Present)
8. Departmental Promotion Committee (2014 – Present)
9. Development of 3+2 program between Hunan Agricultural University (HAU) in China and UHM (2015)
10. Establishment of a new Culinology program (2015)
11. Departmental instruction committee (2008 – 2017)
12. HNFAS Policies and Procedure committee (2006)
13. Volunteered nameplate project (2006)
14. Departmental coordinator for Aloha United Way (AUW) (2007 -2010)
15. Freeze dryer replacement project (2006 -2007)

Services to the College

1. Teaching exchanging program with Hunan Agricultural University (May 16 – 27, 2016)
2. Panel for 2015 CTAHR New Faculty Orientation (August 18, 2015)
3. CTAHR Scholarship Selection Committee (2013- Present)
4. MOU with other institutions
 - College of Agriculture and Life Science, Chungnam National University, Korea, 2015
 - College of Human Ecology, Hanyang University, Korea, 2014
 - College of Life Sciences, Sejong University, Korea, 2014
 - Korea Food Research Institute, Korea, 2011
5. Planning committee for CTAHR/COE Student Research Symposium (2014- Present)
6. CTAHR Lab tours
 - For legislators and UH Regents in 2015
 - For Richard Lim and Karl Fooks (Department of Business, Economic Development & Tourism (DBEDT)) in 2013
 - For DBEDT, Office of State Planning, and Hawaii Department of Agriculture (HDOA) in 2012
7. Judge on CTAHR Student Research Symposium (2007 – Present)
8. UH Business Plan Competition (Won the 2nd place) (2015)
9. Science Symposium for Girls in Grades 5 -8 (2015)
10. Member of the CTAHR instruction committee (2007-2009)

Services to the University

1. Manoa Faculty Senate (2015 - 2016)
 - Committee on Athletics (2015)
 - Committee on Academic Policy and Planning (2016)
2. XLR8UH Proof of Concept Center (2015)
3. Summer Study Abroad Program (Lille, France, 2016 and 2017)
4. UH-AUW charity softball tournament (September 29, 2006)

Services to the Community

1. Founder of JUN INNOVATIONS INC (2014 – Present)
2. Counselor, Development of Maui Food Innovation Center (2012)
3. Participated in SBIR projects with farmers and food manufacturers (Hawaii Fish Company, Hoku Products Pacific, and Frank's nursery)
4. Worked with Hawaiian Host (Product development and sensory testing, 2009)
5. Worked with Kona coffee farmer association (Authentication of pure Kona coffee)
6. Worked with Big Island Abalone (Retort pouch study to enhance the shelf life of abalone)

Services to the Professional Societies

1. A host of NC 1023 annual meeting, Honolulu, HI (2011)
2. Elected member-at-large, Food Engineering Division, IFT (2011- 2012)
3. Secretary of the Hawaii Section of IFT (HIFT, 2009 – Present)
4. Korean-American Food Technologists Association (KAFTA)
 - Vice-president (2009 – 2010)
 - President (2011)
5. Korean Faculty Association in University of Hawaii (KFAUH)
 - Secretary (2010 - 2014)
 - President (2014 – Present)
6. Judge for Hawaii State Science & Engineering Fair (2008 – Present)
7. Editorships
 - Journal of Food Science and Biotechnology (2006 – Present)
 - Food Engineering Progress (2006 – Present)
 - International Journal of Agricultural and Biological Engineering (2012 – Present)
8. NC1023, Multistate project meeting
 - Secretary (2013)

- Vice Chair (2014)
 - Chair (2015)
9. Organizer of USDA NIFA/AFRI Project Director's Meeting: Function and Efficacy of Nutrients, Bioactive Components of Foods, Improved Processing Technologies, Improving Food Quality and Value, and Reducing Food Allergies by Improving Food Quality, Chicago (2015) and Las Vegas (2017)

Graduate Students

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master Committees	2	20
Chair of PhD Committees	2	6
Member of Master Committees	4	40
Member of PhD Committees	2	12

Grant Support

Grants Funded

1. 2024, USDA/NIFA, AFRI, Magnetic field-assisted supercooling to enhance physical, chemical, and nutritional properties of the emulsion-based solid lipid nanoparticles, **Primary Investigator (PI): Soojin Jun**, Co-PIs: Kacie Ho, Amount: **\$457,359**, Duration: 09/24 – 08/27
2. 2022, USDA/NIFA, Empowering Underrepresented Graduate Students With Advanced Research Training In Food Science, Primary Investigator (PI): Kacie Ho, **Co-PIs: Soojin Jun** and Yong Li, Amount: **\$246,000**, Duration: 09/22 – 09/27
3. 2021, USDA/NIFA, AFRI, Electric and magnetic field-based supercooling technology to ensure the freshness in the food supply chain, **Primary Investigator (PI): Soojin Jun**, Co-PIs: Kacie Ho and Yong Li, Amount: **\$481,960**, Duration: 01/21 – 12/23
4. 2018, USDA-ARS NACA Post Harvest Technology and Nutrition Studies for Hawaii Specialty Crops and Fruits, Develop Novel Processing Technologies, **Primary Investigator (PI): Soojin Jun**, Amount: **\$90,303**, Duration: 09/18 – 08/22
5. 2018, CTAHR Supplement Funds, Long-term Fresh Preservation of Highly Perishable Foods (Tropical Fruits and Fish) Using the Supercooling Technology, **Primary Investigator (PI): Soojin Jun**, Amount: **\$80,000**, Duration: 10/18 – 09/20
6. 2018, USDA-ARS NACA Post Harvest Technology, Develop Novel Processing Technologies, **Primary Investigator (PI): Soojin Jun**, Amount: **\$28,303**, Duration: 09/18 – 08/19
7. 2016, CTAHR Supplement Funds, Rapid and Multiplexed Detection of Foodborne Pathogens Using an Electrochemical Immunosensor Modified with Single-walled Carbon Nanotubes, **Primary Investigator (PI): Soojin Jun**, Amount: **\$63,000**, Duration: 10/16 – 09/18
8. 2015, USDA/NIFA, AFRI, Prevention of Microbial Adhesion in Food Processing Environment using Multifunctional Nanopillared Surfaces, **Primary Investigator (PI): Soojin Jun**, Co-PIs: Chang-Hwan Choi and Yong Li, Amount: **\$499,516**, Duration: 01/15 – 12/17
9. 2014, CTAHR Supplement Funds, Multistage dielectrophoresis (DEP) for macro-scale bacterial cell separation in drinking water, **Primary Investigator (PI): Soojin Jun**, Co-PI: Yong Li, Amount: **\$57,110**, Duration: 09/14 – 08/16
10. 2014, Buster Co. South Korea, Investigation and Development of Globalized Functional Wellness Food Products to be Value-added, Based on Tropical Fruits and Plants, **Primary Investigator (PI): Soojin Jun**, Amount: **\$20,466**, 2 years
11. 2013, USDA/NIFA, AFRI, Novel Freezing Technique using Combined Pulsed Electric and Magnetic Fields to Maintain the Qualities of Fresh Fruits and Vegetables, **Primary Investigator (PI): Soojin Jun**, Co-PI: Peter Berkelman, Amount: **\$475,370**, Duration: 12/13 – 11/16
12. 2013, CTAHR Supplement Funds, Pulsed laser beam photothermal technology for selective elimination of foodborne pathogens from fresh fruits and liquid foods using conjugated gold nanoparticles, **Primary Investigator (PI): Soojin Jun**, Co-PI: Yong Li, Amount: **\$44,000**, Duration: 01/13 – 08/14
13. 2013, CTAHR Research Instrumentation Award, Nanofabrication for Bio-Nano Sensing and Anti-Biofilm Surface Coating, **Primary Investigator (PI): Soojin Jun**, Amount: **\$40,000**
Purpose: To purchase nano research associated equipment including Chemical Vapor Deposition (CVD) and Atomic Force Microscopy (AFM)
14. 2012, Korea Food Research Institute, High wear and biofouling resistant nanoparticle-polymer composite coating

- for food processing, **Primary Investigator (PI): Soojin Jun**, Amount: **\$100,000**, Duration: 2/12 – 8/14
15. 2011, CTAHR Catalyst Funds, Aligned Carbon Nanotubes for Biosensing of Foodborne Pathogens in Foods, **Primary Investigator (PI): Soojin Jun**, Co-PI: Yong Li, Amount: **\$135,000**, Duration: 04/11 – 08/13
 16. 2011, CTAHR Research/Extension Supplemental Funds, Detection of *E. coli* O157:H7 using a Nanoneedle Probe Biosensor, **Primary Investigator (PI): Soojin Jun**, Amount: **\$24,000**, Duration: 01/11 – 09/12
 17. 2009, USDA-AFRI, Development of Combined Continuous-Flow Microwave and Pulsed Ohmic Heating Technologies for Rapid and Uniform Heating of Multiphase Foods, **Primary Investigator (PI): Soojin Jun**, Co-PI: Olga Boric Lubecke, Amount: **\$374,798**, Duration: 09/09 – 08/12
 18. 2009, USDA, T-STAR, Innovative Nanoparticulate Surface Coating Technology to Minimize Fouling and Electrochemical Reactions during Tropical Juice Pasteurization, **Primary Investigator (PI): Soojin Jun**, Amount: **\$124,696**, Duration: 09/09 – 08/11
 19. 2008, USDA-Formula, Detection of *E. coli* O157:H7 using a Nanoneedle Probe Biosensor, **Primary Investigator (PI): Soojin Jun**, Co-PIs: Yong Li and Daniel Jenkins, Amount: **\$60,000**, Duration: 10/08 – 09/11
 20. 2008, USDA-ARS, Pasteurization of Kava Juice using a Novel Continuous Flow Dual Magnetron Microwave System, **Primary Investigator (PI): Soojin Jun**, Co-PI: Yong Li, Amount: **\$67,484**, Duration: 09/08 – 08/10
 21. 2007, Research Relations Fund Award, University Research Council, Test the Feasibility of Aligned Carbon Nanotube (ACNT) Arrays for Surface Plasmon Resonance (SPR) Immunosensor, **Primary Investigator (PI): Soojin Jun**, Amount: **\$5,000**, Duration: 01/08 – 01/09
 22. 2007, University Research Council, Faculty Travel Fund Award, **Soojin Jun**, Amount: **\$800**
Purpose: Support my trip to attend the annual meeting of Institute of Food Technologists (IFT) in Chicago, IL, 07/27/07 – 08/01/07
 23. 2006, Research Relations Fund Award, University Research Council, Innovative Hydrophobic Surface Treatment Technology for Food Processing, **Primary Investigator (PI): Soojin Jun**, Amount: **\$5,000**, Duration: 05/06 – 05/07
 24. 2006, Hatch Project, Nanoscale Surface Coating Study to Minimize Electrochemical Reaction and Fouling Occurrence during Food Processing, **Primary Investigator (PI): Soojin Jun**, Amount: **\$18,672**, Duration: 10/06 – 09/11
 25. 2006, University Research Council, Faculty Travel Fund Award, **Soojin Jun**, Amount: **\$1,600**

Other Grants

1. 2023, JUN INNOVATIONS INC: NIH Small Business Innovation Research (SBIR) Phase I, Oscillating Magnetic Field Assisted Supercooling Preservation of Fresh and Unfrozen Ovaries at Subzero Temperatures, **\$270,000**, 12/01/23 – 11/30/24.
2. 2021, JUN INNOVATIONS INC: High Technology Development Corp. HSBIR Matching Fund (Phase I), **\$25,000**, 07/2021 – 02/2022.
3. 2021, JUN INNOVATIONS INC: USDA Small Business Innovation Research (SBIR) Phase I, Enhanced Bacterial Viability of Freeze-dried Probiotics using the Supercooling Pretreatment, **\$100,000**, 07/01/21 – 02/28/22.
4. 2020, JUN INNOVATIONS INC: R&D contractual agreement with LG Electronics, Supercooling preservation of food materials using pulsed electric and oscillating magnetic fields, **\$99,000**, 01/01/20 – 12/31/20.
5. 2017, JUN INNOVATIONS INC: USDA Small Business Innovation Research (SBIR) Phase II, Commercialized Supercooling Technology for Subzero Nonfreezing Preservation of Fresh Foods, **\$596,592**, 09/01/17 – 08/31/19.
6. 2018 JUN INNOVATIONS INC: High Technology Development Corp. HSBIR Matching Fund (Phase II), **\$100,107**, 03/2018 – 08/2019
7. 2016, JUN INNOVATIONS INC: USDA Small Business Innovation Research (SBIR) Phase I, Design of a Supercooling Device for Extended Shelf Life of Perishable Foods, **\$99,468**, 08/15/16 – 05/31/17.
8. 2016 JUN INNOVATIONS INC: High Technology Development Corp. HSBIR Matching Fund (Phase I), **\$49,700**, 02/2017 – 05/2017
9. 2015, JUN INNOVATIONS LLC (**Founded by Soojin Jun**): one of 2015 cohorts of XLR8UH, a major commitment to transform the university's world-class research and talent into viable products and businesses (Phase I, **\$25,000**).
10. 2015, PepsiCo, Measurements of dielectric properties of ivory soap and marshmallow at different temperature ranges, **\$16,000**, 2 service
11. 2014, PepsiCo, Measurements of dielectric properties of salt samples at different temperature ranges, **\$2,000**, 1 service
12. 2010, USDA-SBIR, Phase I, Innovative Marking of Hawaiian Pongee, Primary Investigator (PI): Ronald

- Weidenbach, **Consultant: Soojin Jun**, Total amount: **\$90,000**, Duration: 09/10 – 03/11
13. 2007, Industrial Fund (Grove Farm), Optimization of Processing Techniques for Taro Products in a Production Scale, **Primary Investigator (PI): Soojin Jun**, Amount: **\$21,320**, Duration: 10/07 – 02/08
 14. 2007, Multistate Project (NC1023), Improvement of thermal and alternative processes for foods, Primary Investigator (PI): Soojin, Amount: **\$40,000**, Duration: 10/05 – 09/10

Presentations at Conferences

Conference Abstracts

1. Lee, D. and **Jun, S.** 2024. Investigating the stability of supercooled states under mechanical stress, Conference of Food Engineering (CoFE 24), Seattle, WA, August 25 -28.
2. An, S. and **Jun, S.** 2024. Predicting Physicochemical Properties of Papayas (*Carica papaya* L.) using a Convolutional Neural Networks (CNN) Model Approach, Conference of Food Engineering (CoFE 24), Seattle, WA, August 25 -28.
3. So, HJ., Lee, D., and **Jun, S.** 2024. Application oscillating magnetic field-based supercooling treatment on solid lipid nanoparticles, Conference of Food Engineering (CoFE 24), Seattle, WA, August 25 -28.
4. Lee, D. and **Jun, S.** 2023. Supercooling Preservation of Perishable Foods: Alternating Electric Field for Scaling Up. Institute of Food Technologists, July 16-19, Chicago, IL
5. An, S. and **Jun, S.** 2023. A Machine Learning Approach for Predictable Textural Attributes of Papayas (*Carica papaya* L.). Institute of Food Technologists, July 16-19, Chicago, IL
6. Lee, I. and **Jun, S.** 2023. Flow-based dielectrophoretic biosensor for detection of bacteriophage MS2 as a foodborne virus surrogate, June 20-23, ICEF 14, Nantes, France
7. Lee, D. and **Jun, S.** 2023. Electric and magnetic field-based supercooling technology to ensure the freshness of yellowfin tuna (*Thunnus albacares*) June 20-23, ICEF 14, Nantes, France
1. **Jun, S.** 2020. Exploration of combined electric and magnetic field emissions for supercooling preservation of perishable food materials. ICCF 2020 – International IIR Cold Chain Conference, Nantes, France, April 26-28.
2. **Jun, S.** 2019. Study of Subzero Chilling Protocols for Extended Freshness and Shelf Life of Food Materials. 2019 Agricultural Biotechnology Symposium, Engineering Innovations for Food Processing and Materials, Seoul National University, Korea, November 1.
3. **Jun, S.** 2019. Supercooling Technology for Extended Shelf Life of Perishable Foods, 2019 KFN International Symposium and Annual Meeting, International Convention Center Jeju (ICC Jeju), Jeju, South Korea, October 23 -25.
4. **Jun, S.** 2019. Supercooling Technology for Extended Shelf Life of Perishable Foods, Advances in Food Process Engineering, ICEF13 - 13th International Congress on Engineering and Food, September 23-26, Melbourne, Australia
5. Lee, B. and **Jun, S.** 2019. Microfluidic-based dielectrophoretically trapped electrochemical immunosensor for the detection of bacteriophage MS2 as a foodborne virus surrogate. Institute of Food Technologists, June 2-5, New Orleans, LA (**Second place at Division Student Competition**)
6. Kang, T., Hoptowit, R., You, Y., Chen, J., Francis, S., and **Jun, S.** 2019. Effect of an external magnetic field on supercooling of water and its application for food preservation. Institute of Food Technologists, June 2-5, New Orleans, LA
7. Francis, S. and **Jun, S.** 2019. Optimization of Magnetic Field in a Solenoid Using “Electromagnetic Works” (EMW) Finite Element Analysis (FEA). Institute of Food Technologists, June 2-5, New Orleans, LA
8. **Jun, S.** 2018. Nano-engineered stainless steel surface to prevent biofilm formation of foodborne pathogens. Conference of Food Engineering (CoFE), September 9-12, Minneapolis, MN
9. **Jun, S.** and Kang, T. 2018. Effect of electric and magnetic field on supercooling of beef steaks with different fat level. Conference of Food Engineering (CoFE), September 9-12, Minneapolis, MN
10. Chun, C., and **Jun, S.** 2018. Removal of *Escherichia coli* K12 from contaminated tap water using a single-stage dielectrophoresis (DEP) device filled with glass beads. Institute of Food Technologists, Chicago, IL (**First place at Division Student Competition**)
11. Kang, T., Hoptowit, R., Francis, S., and **Jun, S.** 2018. Exploration of electric and magnetic field emissions for supercooling preservation of beef with diverse fat/lean compositions. Institute of Food Technologists, Chicago, IL
12. **Jun, S.** 2018. Nano-engineered surfaces guard against biofouling. Institute of Food Technologists, Chicago, IL
13. Lee, B.E., Lee, I., **Jun, S.** 2018. A portable electrochemical impedance bioaffinity sensor with applied turbulent flow for on-site detection of food pathogens. Institute of Food Technologists, Chicago, IL (**Second place at Division Student Competition**)

14. Lee, I. and **Jun, S.** 2018. Flow-based dielectrophoretic biosensor for rapid and sensitive detection of bacteriophage MS2 as a foodborne virus surrogate. Institute of Food Technologists, Chicago, IL
15. Ban, G., Li, Y., and **Jun, S.** 2017. Fabrication of nano-engineered stainless steel to prevent biofilm formation of foodborne pathogens, International Association for Food Protection, July 9-12, Tampa, FL
16. Her, J., Kang, T., and **Jun, S.** 2017. Supercooling of fresh-cut honeydew melon: Effect of oscillating magnetic field (OMF). Institute of Food Technologists, Las Vegas, NV.
17. Hoptowit, R. and **Jun, S.** 2017. Design and fabrication of a microcontroller based supercooling control unit for use in food preservation. Institute of Food Technologists, Las Vegas, NV.
18. Kang, T., Hoptowit, R., and **Jun, S.** 2017. Investigation of the effect of oscillating magnetic field on fresh-cut pineapple and agar gel as a model food during supercooling preservation. Institute of Food Technologists, Las Vegas, NV.
19. **Jun, S.** 2016. Nano-engineered surfaces for prevention of biofilm and bacterial adhesion. Conference of Food Engineering (CoFE), September 12-14, Columbus, OH
20. **Jun, S.** 2016. Computational Modeling for Thermal Pattern and Lethality of Multiphase Foods in a Dual Cylindrical Microwave and Ohmic Combination Heater. Conference of Food Engineering (CoFE), September 12-14, Columbus, OH
21. **Jun, S.**, Li, Y., Choi, C., and Her, J. 2016. Nano-engineered Sanitation Surfaces for Prevention of Bacterial Adhesion (ID# 12084) at IAFP 2016, July 31-August 3, 2016 in St. Louis, Missouri
22. Her, J., Hoptowit, R., Kang, T., and **Jun, S.** 2016. Supercooling of perishable foods for extended freshness and shelf life in the cold chain. FOOMA JAPAN International Food Machinery & Technology Exhibition, June 7-10, Tokyo, Japan
23. Lee, S.H. and **Jun, S.** 2015. Computational Modeling for Thermal Pattern and Lethality of Multiphase Foods in a Dual Cylindrical Microwave and Ohmic Combination Heater. The 2015 IFT Annual Meeting, July 11-14, Chicago, IL (031-028)
24. Lee, I. and **Jun, S.** 2015. Multiplexed Detection of Foodborne Pathogens Using a Lateral Flow Type Multi-Junction Biosensor. The 2015 IFT Annual Meeting, July 11-14, Chicago, IL (099-029)
25. Cebricos, J., Hoptowit, R., and **Jun, S.** 2015. Yeast Removal From Beer Using a Continuous Multistage Dielectrophoresis Device. The 2015 IFT Annual Meeting, July 11-14, Chicago, IL (099-041)
26. Rungraeng, N. and **Jun, S.** 2015. Nanoscale Patterning on Stainless Steel Surfaces for Prevention of Bacterial Adhesion. The 2015 IFT Annual Meeting, July 11-14, Chicago, IL (099-100)
27. Shafel, T., Lee, S.H., and **Jun, S.** 2015. Extension of Supercooled State in Beef Steak using Pulsed Electric Fields and Oscillating Magnetic Fields as a Novel Preservation Technique. The 2015 IFT Annual Meeting, July 11-14, Chicago, IL (**Second place at Division Student Competition**)
28. **Jun, S.** 2015. Single walled carbon nanotube-based junction biosensor for detection of foodborne pathogens. FOOMA JAPAN International Food Machinery & Technology Exhibition, June 9-12, Tokyo, Japan
29. **Jun, S.** 2014. A Finite Element Method Based Flow and Heat Transfer Model of Continuous Flow Microwave and Ohmic Combination Heating for Particulate Foods. FOOMA JAPAN International Food Machinery & Technology Exhibition, June 10-13, Tokyo, Japan
30. Lee, S.H., Choi, W. and **Jun, S.** 2014. Computational Modeling for the Validation of Thermal Sterilization and Heating Profile of Multiphase Foods in a Dual Cylindrical Microwave and Ohmic Combination Heater. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (024-120)
31. Lee, I., Choi, W., and **Jun, S.** 2014. Macro-scale cascade dielectrophoresis (DEP) device for continuous flow bacteria cell separation in drinking water. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (024-121)
32. Rungraeng, N., Hizal F., Choi, C., and **Jun, S.** 2014. Prevention of microbial adhesion using nano-engineered alumina surfaces. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (024-95)
33. Rungraeng, N., Yoon, S.H., and **Jun, S.** 2014. Prevention of *Listeria monocytogenes* adhesion on food contact surface using easy-to-clean self-slippery cellulose nanofiber coating. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (024-93)
34. Shafel, T., Mok, J.H., and **Jun, S.** 2014. Quality factor analysis of a chicken breast maintained at an extended supercooling state. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (030-03)
35. Yamada, K. and **Jun, S.** 2014. Multiplexed detection of foodborne pathogens using a single walled carbon nanotube based biosensor. The 2014 IFT Annual Meeting, June 21-24, New Orleans, LA (024-3)
36. Yamada, K. and **Jun, S.** 2014. Single walled carbon nanotube-based junction sensor for detection of *Escherichia coli*. Conference of Food Engineering, April 7-9, Omaha, NE
37. Lee, S.H. and **Jun, S.** 2014. A Continuous Flow Microwave and Ohmic Combination Heater for Particulate Foods: Design and Modeling Approaches. Conference of Food Engineering, April 7-9, Omaha, NE (**2nd Best**)

Graduate Student Presentation Award)

38. Yamada, K and **Jun, S.** 2013. Multi-junction microwire sensor for simultaneous detection of foodborne pathogens. The 2013 IFT Annual Meeting, July 14-16, Chicago, IL (300-02) (Second place at Division Student Competition)
39. Rungraeng, N, Yoon, S.H., and **Jun, S.** 2013. Development of Easy-to-clean Slippery Liquid-infused Carbon Nanotube Composite Structure Coating on Food Contact Surface. The 2013 IFT Annual Meeting, July 14-16, Chicago, IL (031-16) (Third place at Division Student Competition)
40. Lee, S.H., Choi, W., and **Jun, S.** 2013. Continuous Flow, Simultaneous Microwave, and Ohmic Combination Heating Technology for Multiphase foods: Simulation for Thermal Uniformity and Lethal Effectiveness. The 2013 IFT Annual Meeting, July 14-16, Chicago, IL (031-21)
41. Jin, H.K. and **Jun, S.** 2013. Effect of combined pulsed electric field (PEF) and static magnetic field (SMF) on food freezing. The 2013 IFT Annual Meeting, July 14-16, Chicago, IL (031-33)
42. Choi, W., Lee, S.H., and **Jun, S.** 2013. Application of an ohmic thawing unit combined with a microwave heater. The 2013 IFT Annual Meeting, July 14-16, Chicago, IL (031-18)
43. **Jun, S.** 2013. Nano/Microwire-Based electrochemical biosensor for rapid detection of foodborne pathogens. FOOMA JAPAN International Food Machinery & Technology Exhibition, June 11-14, Tokyo, Japan
44. Abdullah, S., Choi, W., and **Jun, S.** 2012. Simulation of Antioxidants Activity of Grape Juice with Continuous Flow Ohmic Heating, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-01)
45. Lee, S.H., Choi, W., Nguyen, L., and **Jun, S.** 2012. Continuous Flow, Simultaneous Microwave, and Ohmic Combination Heating Technology for Thermal Uniformity of Multiphase Foods, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-16)
46. Lu, L. and **Jun, S.** 2012. Electrochemical Impedance Spectroscopic Technique with a Functionalized Microwire Sensor for Rapid Detection of Foodborne Pathogens, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-73)
47. Rungraeng, N. and **Jun, S.** 2012. Superhydrophobic and Superhydrophilic Nanocomposite Coatings for Preventing Microbial Adhesion in Liquid Food Flow Channel, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-109) (First place at Division Student Competition)
48. Choi, W., Lee, S.H., and **Jun, S.** 2012. Understanding of Crack Propagation of a Potato Slice during Freeze Drying using the Continuum Truss Structure Model, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-159)
49. Chee, G. and **Jun, S.** 2012. Pulsed CO₂ Laser Beam Technology for the Selective Elimination of Surface and Sub-Layer *E. coli* K12 from Fresh Fruits, The 2012 IFT Annual Meeting, June 26-28, Las Vegas, NV (077-160)
50. Choi, W., **Jun, S.**, Nguyen, L.T., Rungraeng, N., Puri, V.M., Yi, H., Balasubramanian, S., and Lee, J. 2011. 3D Milk-Fouling Modeling of Plate Heat Exchangers with Different Surface Finishes using Computational Fluid Dynamics. The 2011 IFT Annual Meeting, June 12-14, New Orleans, LA (290-07)
51. Nguyen, L.T., Choi, W., Lee, S.H., and **Jun, S.** 2011. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. The 2011 IFT Annual Meeting, June 12-14, New Orleans, LA (289-04)
52. Lu, L., Chee, G., Li, Y., and **Jun, S.** 2011. A microwire Sensor Functionalized to Detect *E. coli* Bacterial Cells in Tropical Fresh Produce. The 2011 IFT Annual Meeting, June 12-14, New Orleans, LA (032-03)
53. Rungraeng, N. and **Jun, S.** 2011. Polytetrafluoroethylene-based Carbon Nanotube Coating for Nonstick Surface in Plate Heat Exchanger. The 2011 IFT Annual Meeting, June 12-14, New Orleans, LA (290-24)
54. **Jun, S.** 2011. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. 45th Annual Microwave Power Symposium (IMPI 45), June 8-10, New Orleans, LA
55. **Jun, S.**, Nguyen, L.T., Choi, W., and Lee, S.H. 2011. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. International Congress on Engineering and Food (ICEF11), May 22-26, Athens, Greece (NFP1045)
56. Lee, S.H. and **Jun, S.** 2010. Exploring the Uniformity in Thermal Patterns of Multiphase Foods using the Novel Microwave and Ohmic Combination Heating Technology. The 2010 IFT Annual Meeting, July 18-20, Chicago, IL (071-20)
57. Kim, S., Lu L., Chung, J., Lee, K., Li, Y., and **Jun, S.** 2010. A Rapid Detection Method of *Escherichia coli* K-12 in Fresh Produce using Electric Field Driven Microwire Device. The 2010 IFT Annual Meeting, July 18-20, Chicago, IL (085-01)
58. Kim, S., Chung, J., and **Jun, S.** 2009. Detection of Foodborne Microorganisms using Electric Field Driven Microwire Device and Surface Plasmon Resonance Biosensor. The 2009 IFT Annual Meeting, June 6-9, Anaheim,

CA

59. Lee, S.H., Kim, S.K., and **Jun, S.** 2009. Enhancement of Sugar Release from Taro Wastes for Subsequent Ethanol Production Using Microwave and Ohmic Heating. The 2009 IFT Annual Meeting, June 6-9, Anaheim, CA
60. **Jun, S.**, He, H., Shim, J.Y., Park, G.W., Lee, C.N., and Li, Y. 2008. Pulsed ohmic heating for milk pasteurization. The 2008 IFT Annual Meeting, June 29-July 2, New Orleans, LA (095-02)
61. Shim, J.Y., Khurana, H.K., Cho, I.K., Li, Q.X., and **Jun, S.** 2008. Attenuated total reflectance fourier transform infrared spectroscopy coupled with multivariate analysis for measurement of acesulfame-K in diet foods. The 2008 IFT Annual Meeting, June 29-July 2, New Orleans, LA (094-04)
62. Shim, J.Y. and **Jun, S.** 2008. Modeling of Ohmic Heating Patterns of Multi-phase Food Products Using Computational Fluid Dynamics Codes. The 75th Annual Meeting of Korean Society of Food Science and Technology (KSFST), June 18-20, Kwangjoo, Korea
63. **Jun, S.**, Kim, Y., Cox, L., and Huang, A. 2007. Study on the potential of retort pouches for adding value to less desirable cuts of beef. The 2007 IFT Annual Meeting, July 29-Aug 1, Chicago, Michigan (096-42)
64. Somavat, R., Rodriguez-Romo, L., Yousef, A., and **Jun, S.** 2007. Ohmic sterilization inside a pouch made up of multilayered laminate for NASA's long duration space mission. The 2007 IFT Annual Meeting, July 29-Aug 1, Chicago, Michigan (096-29)
65. Khurana, H.K., **Jun, S.**, and Kanawjia, S.K. 2007. Utilization of exopolysaccharide producing strain (EPS+) of *Lactococcus lactis* as biostabilizer for manufacture of superior quality dahi (traditional Indian set fermented milk product). The 2007 IFT Annual Meeting, July 29-Aug 1, Chicago, Michigan (046-02)
66. Ozden, H.O., Nasir, H., **Jun, S.**, Na, B., and Puri, V.M. 2006. Bench scale heat exchanger fouling: coated surfaces. An ASABE 2006 Annual Meeting Presentation, Portland, Oregon, July 9-12, No. 066131
67. **Jun, S.**, and Sastry, S.K. 2005. Reusable Pouch Development for Long Term Space Mission: Thermal Distribution in 3D and Food Contamination for Ohmically Treated Pouches. 2005 AIChE Annual Meeting, October 30-November 4, Cincinnati, Ohio
68. **Jun, S.**, and Sastry, S.K. 2005. Reheating and Sterilization Technology for Food, Waste and Water: Design and Development Considerations for Package and Enclosure. International Conference on Environmental Systems (ICES), July, Rome, Italy
69. **Jun, S.**, and Puri, V.M. 2005. 3D Milk Fouling Model of Plate Heat Exchangers using Computational Fluid Dynamics. 2005 ASAE Annual International Meeting, July 17-20, Tampa, Florida
70. **Jun, S.** and Heskitt, B., Sastry, S.K., Mahna, R., Marcy, J., and Perchonok, M. 2005. Modeling and optimization of pulsed ohmic heating of foods within a flexible package. The 2005 IFT Annual Meeting, July 16-20, New Orleans, Louisiana
71. Ozden, H., **Jun, S.**, and Puri, V.M. 2004. Sensitivity analysis of plate heat exchangers using FLUENT. 2004 NABEC conference, June 27-30, University Park, Pennsylvania.
72. **Jun, S.** and Puri, V.M. 2004. Fouling performance of plate heat exchangers using a 2D dynamic model. 2004 NABEC conference, June 27-30, University Park, Pennsylvania.
73. **Jun, S.** and Puri, V.M. 2003. Development of user-friendly interface for computational model of temperature and moisture distributions during microwave heating of food materials. ASAE Annual International Meeting, July 27-30, Las Vegas, Nevada
74. **Jun, S.** and Puri, V. M. 2003. Dynamic modeling of thermal performance of multichannel plate heat exchangers. ASAE Annual International Meeting, July 27-30, Las Vegas, Nevada
75. **Jun, S.** and Irudayaraj, J. 2002. Exploring a selective heating technique for food components using Infrared radiation. The 2002 IFT Annual Meeting, June 15 -19, Anaheim, California
76. **Jun, S.** and Irudayaraj, J. 2002. Exploring the disinfection of fungal spores in corn meal using selective IR heating technique. The 2002 IFT Annual Meeting, June 15 -19, Anaheim, California
77. **Jun, S.** and Irudayaraj, J. 2001. Exploring the concept of selective heating of food powders. Fine powder processing 2001 - An international conference on Fine grinding, Oct 1-3, The Pennsylvania State University
78. **Jun, S.**, Ranjan, R., Elkind, J., Barthalomew, D., and Irudayaraj, J. 2001. Monitoring chemical and microbial status using surface plasmon resonance based on biosensor. 94th Annual International meeting of ASAE, July 29-Aug 1, Sacramento, California
79. **Jun, S.** and Irudayaraj, J. 2001. Design of selective heating system for food using Far infrared radiation. The Center for Food Manufacturing (CFM), June
80. Irudayaraj, J. and **Jun, S.** 2000. Automated Infrared system for selective heating of food. 93rd Annual International meeting of ASAE, July 9-12, Milwaukee, Wisconsin
81. Irudayaraj, J. and **Jun, S.** 1999. Design of selective heating system for food using Far infrared radiation. Conference on Technologies for the new millennium in commemoration of the 53rd anniversary of Research &

Development Associates for military food and packaging systems, Inc. Fall '99 meeting, Nov 1-2, Pittsburgh, PA

Other Symposiums Attended

1. Senga K, Kang T.Y., Lee B.E., Lee C.N., Li Y., **Jun S.J.** 2018. Developmental Methods of Alcohol Fermentation Through The Use of Taro. Annual CTAHR Student Research Symposium. Undergraduate Poster session (**CTAHR Awards of Merit**)
2. Brian Izawa, Yong Li, and **Soojin Jun.** 2018. Development and exploration of alcohol production from fresh pineapple waste. Annual CTAHR Student Research Symposium. Undergraduate Poster session (**CTAHR 2nd Place**)
3. Cebricos, J., Li, Y., and **Jun, S.** 2016 Separation of Bacteriophage MS2 From Contaminated Tap Water Using a Single Stage, Continuous Flow Dielectrophoresis (DEP) device. The 28th Annual CTAHR Student Research Symposium, MS oral session (**CTAHR Best MS Student Oral Presentation**)
4. Lee, I. and **Jun, S.** 2016. Bio-nanocomposites-based electrochemical immunosensor for detection of *Escherichia coli*. The 28th Annual CTAHR Student Research Symposium, PhD poster session
5. Hoptowit, R., Her, J., and Jun, S. 2016. Pulsed Electric Field (PEF) and Oscillating Magnetic Field (OMF) device fabrication and its effect on Strawberry. The 28th Annual CTAHR Student Research Symposium, MS poster session
6. Lee, I. and **Jun, S.** 2015. Single walled carbon nanotube (SWCNT) functionalized junction biosensor for detection of *Escherichia coli* in continuous flow system. The 27th Annual CTAHR Student Research Symposium, PhD poster session (**Gamma Sigma Delta PhD Student Poster Presentation**)
7. Cebricos, J. and **Jun, S.** 2015 Separation of *Escherichia coli* K12 from drinking water using dielectrophoresis in a single stage, continuous flow device. The 27th Annual CTAHR Student Research Symposium, MS poster session (**CTAHR MS Student Poster Presentation Award of Merit**)
8. Shafel, T. and **Jun, S.** 2015. Extension of supercooled state in beef steak using pulsed electric fields and oscillating magnetic fields as a novel preservation technique. The 27th Annual CTAHR Student Research Symposium, MS Oral session
9. Shafel, T., **Jun, S.**, and Mok, J.H. 2014. Quality factor analysis of a chicken breast maintained at an extended supercooling state. The 26th Annual CTAHR Student Research Symposium, MS Poster session (**CTAHR Best MS Student Poster Presentation**)
10. Cebricos, J. and **Jun, S.** 2014. Yeast Cell Separation in Korean Rice Wine using a Continuous Single-Stage Dielectrophoresis Device. The 26th Annual CTAHR Student Research Symposium, Undergraduate Poster session (**CTAHR Undergraduate Poster Presentation Award of Merit**)
11. Yamada, K., Choi, W., and **Jun, S.** 2014. Nano-based Multi-junction Biosensor for Detection of Foodborne Pathogens. The 26th Annual CTAHR Student Research Symposium, MS Oral session (**Gamma Sigma Delta MS Student Oral Presentation**)
12. Lee, S.H., Choi, W., and **Jun, S.** 2014. Computational modeling for the validation of thermal lethality and heating profile of multiphase foods in a dual cylindrical microwave and ohmic combination heater. The 26th Annual CTAHR Student Research Symposium, PhD Oral session
13. Rungraeng, N., Hizal, F., Choi, C-H, and **Jun, S.** 2014. Prevention of Foodborne Microbial Adhesion Using Different Nano-Engineered Surfaces. The 26th Annual CTAHR Student Research Symposium, PhD Oral session (**CTAHR Best PhD Student Oral Presentation**)
14. Mok, J.H., Choi, W., and **Jun, S.** 2013. Emerging pulsed electric field (PEF) and static magnetic field (SMF) combination technology for food freezing. The 25th Annual CTAHR Student Research Symposium. MS Poster session
15. Rungraeng, N. and **Jun, S.** 2013. Development of Self-slippy Liquid-infused Carbon Nanotube Composite Structure Coating on Food Contact Surface for Prevention of Microbial Biofilm. The 25th Annual CTAHR Student Research Symposium. PhD Poster session
16. Liu, T., Abbley, T., and **Jun, S.** 2013. Yeast Removal by Dielectrophoresis to Control the Shelf Life of Korean Rice Wine. The 25th Annual CTAHR Student Research Symposium. Undergraduate Poster session
17. Yamada, K. and **Jun, S.** 2013. Bio-Nano Combinatorial Junction Sensor for Rapid Detection of Foodborne Pathogens. The 25th Annual CTAHR Student Research Symposium. MS Poster session
18. Ho, K., Yamada, K., Lee, S.H., and **Jun, S.** 2012. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. The 24th Annual CTAHR Student Research Symposium. Undergraduate Poster session
19. Abdullah, S. A., Choi, A., and **Jun, S.** 2012. Simulated Degradation of Antioxidant Activity of Grape Juice Pasteurized with Continuous Flow Ohmic Heating. The 24th Annual CTAHR Student Research Symposium, PhD

poster session

20. Chee, G. and **Jun, S.** 2012. Pulsed CO₂ laser beam technology for the selective elimination of surface and sub-layer E. coli K12 from fresh fruits. The 24th Annual CTAHR Student Research Symposium, MS poster session
21. Rungraeng, N. and **Jun, S.** 2012. Superhydrophobic and superhydrophilic nanocomposite coatings for preventing microbial adhesion in liquid food flow channel. The 24th Annual CTAHR Student Research Symposium, PhD poster session
22. Mok, J.H. and **Jun, S.** 2012. Electrochemical Impedance Spectroscopic Technique with a Functionalized Microwire Sensor for Rapid Detection of Foodborne Pathogens. The 24th Annual CTAHR Student Research Symposium, MS poster session
23. Chee, G., Rungraeng, N., and **Jun, S.** 2011. Authentication and Quantification of Kona Coffee using Fourier Transform Infrared Spectroscopy. The 23rd Annual CTAHR Student Research Symposium, MS poster session
24. Lee, S.H., Nguyen, L.T., Choi, W., and **Jun, S.** 2011. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. The 23rd Annual CTAHR Student Research Symposium, PhD poster session
25. Lu, L., Li, Y., and **Jun, S.** 2011. A Microwire Sensor Functionalized to Detect Escherichia coli Bacterial Cells in Bacteria-Polystyrene Beads Mixture. The 23rd Annual CTAHR Student Research Symposium, MS poster session
26. Rungraeng, N. and **Jun, S.** 2011. Polytetrafluoroethylene-based Carbon Nanotube Coating for Milk Fouling Reduction in Plate Heat Exchanger. The 23rd Annual CTAHR Student Research Symposium, PhD poster session
27. Kim, S., Lu L., Chung, J., Lee, K., Li, Y., and **Jun, S.** 2010. Microwire Fishing of E. coli from Fresh Produce. The 22nd Annual CTAHR Student Research Symposium, MS poster session
28. Lee, S.H. and **Jun, S.** 2010. Electrophoresis Induced Breakdown of Cellular Structures in Taro Skins for Enhancement of Sugar Release for Bioethanol Production. The 22nd Annual CTAHR Student Research Symposium, MS poster session.
29. Rungraeng, N., Choi, W., Nguyen, L.T., and **Jun, S.** 2010. 3D Milk Fouling Model of Plate Heat Exchangers using Computational Fluid Dynamics. The 22nd Annual CTAHR Student Research Symposium, MS poster session
30. Ahmad, S. Cho, I., and **Jun, S.** 2010. Extension of Shelf Life of Raisin Juice Treated by Continuous Flow Pasteurization Methods. The 22nd Annual CTAHR Student Research Symposium, MS poster session
31. Kim, S., Chung, J., and **Jun, S.** 2009. Detection of Foodborne Microorganisms using Electric Field Driven Microwire Device and Surface Plasmon Resonance Biosensor. The 21th Annual CTAHR Student Research Symposium, MS poster session
32. Lee, S.H., Kim, S.K., and **Jun, S.** 2009. Enhancement of Sugar Release from Taro Wastes for Subsequent Ethanol Production Using Microwave and Ohmic Heating. The 21th Annual CTAHR Student Research Symposium, MS poster session
33. Kim, S., **Jun, S.**, He, H., Lee, C.N., and Li, Y. 2008. Pulsed ohmic heating for milk pasteurization, The 20th Annual CTAHR Student Research Symposium, Undergraduate poster session
34. **Jun, S.** 2006. Using the Flexible Retort Pouch to Add Value to Agricultural Products. Mealani Forage Field Day, Waimea, Hawaii County, Poster presentation

Invited Seminars/lectures

1. **Jun, S.** 2023. Non-conventional cold storage regime for food at subzero temperature; challenges and recent developments, Keynote speaker, August 23, 26th International Congress of Refrigeration, Paris, France.
2. **Jun, S.** 2018. Supercooling Technology for Extended Shelf Life of Perishable Foods, Fourth Annual Future Focus conference at the Hawaii Convention Center, October 10-11, 2018.
3. **Jun, S.** 2015. Food nanotechnology for biosensing and biofilm prevention. 2015 International Symposium and Annual Meeting at Alpensia Resort Convention Center, Pyeongchang, South Korea, August 24 -26.
4. **Jun, S.** 2015. Food nanotechnology for biosensing and biofilm prevention. Rural Development Administration, Jeonju-si, South Korea, August 4.
5. **Jun, S.** 2015. Nano-engineered surfaces for prevention of biofilm and bacterial adhesion. Korea Food Research Institute (KFRI), Seongnam-si, South Korea, June 30.
6. **Jun, S.** 2015. Food preservation and beyond. Samsung Electronics Co, Suwon-si, South Korea, June 19.
7. **Jun, S.** 2015. Nano-engineered surfaces for prevention of biofilm and bacterial adhesion. The 82nd Annual Meeting of Korean Society of Food Science and Technology (KoSFoST) at Bexco Convention Center, Busan, Republic of Korea, June 3 -5.
8. **Jun, S.** 2015. Sustainable food processing innovations: supercooling and anti-biofilm nano-engineered surface design. Purdue University, West Lafayette, IN, February 12.

9. **Jun, S.** 2015. Food processing innovations: supercooling and hybrid combination. University of Nebraska, Lincoln, NE, January 20.
10. **Jun, S.** 2014. Quality factor control and analysis of a chicken breast maintained at an extended supercooling state below the freezing point. The 81st Annual Meeting of Korean Society of Food Science and Technology (KoSFoST) in Gwangju, South Korea, August 25 – 27.
11. **Jun, S.** 2014. Carbon nanotube-based multi-junction biosensor for detection of foodborne pathogens. Chung-Ang University, Ansan-si, South Korea, July 31.
12. **Jun, S.** 2014. Nanotech and Biosensor for Food Applications. The Ohio State University, Columbus, OH, February 5.
13. **Jun, S.** 2014. Quality factor control and analysis of a chicken breast maintained at an extended supercooling state below the freezing point. CJ Cheiljedang Corporation, Seoul, South Korea, August 19.
14. **Jun, S.** 2013. Nanotech and Biosensor for Food Applications. Pennsylvania State University, University Park, PA, August 6.
15. **Jun, S.** 2013. Nanocomposite Coating for Biofouling Inhibition. US-Korea Conference 2013. East Rutherford, NJ, August 9.
16. **Jun, S.** 2013. ‘Microwire Sensor for Food Applications’ and ‘High Wear and Biofouling Resistant Nanoparticle-Polymer Composite Coating for Food Processing’. Oceanit, Honolulu, HI, April 5.
17. **Jun, S.** 2013. Alternative Technologies in Food Processing for Energy Efficiency. University of California, Davis, CA, January 14.
18. **Jun, S.** 2012. Nano-Microwire Sensor for Food Applications. Rural Development Administration, Suwon-si, South Korea, December 14.
19. **Jun, S.** 2012. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. Kyung Hee University, Yongin-si, South Korea, December 14.
20. **Jun, S.** 2012. Electrochemical Impedance Spectroscopic Technique with a Functionalized Microwire Biosensor for Rapid Detection of Foodborne Pathogens. US-Korea Conference 2012. Los Angeles, CA, August 11.
21. **Jun, S.** 2012. “Intelligence” in Food Packaging: Trends and Applications. Korea Ginseng Corporation (KGC), Daejeon, South Korea, June 12.
22. **Jun, S.** 2012. Exploring the Heating Patterns of Multiphase Foods in a Continuous Flow, Simultaneous Microwave and Ohmic Combination Heater. The 79th Annual Meeting and International Symposium of Korean Society of Food Science and Technology (KoSFoST), Daejeon Convention Center, Daejeon, South Korea, June 13 -15.
23. **Jun, S.** 2012. Nanotech and Biosensor for Food Applications. Department of Food Science & Engineering, Ewha Womans University, South Korea, June 11.
24. **Jun, S.** 2011. Intelligence in Food Packaging: Trends and Applications. 2011 International Symposium of Korean Society for Food Engineering, KINTEX, Ilsan, South Korea, April 28.
25. **Jun, S.** 2010. Microwire fishing and combination heating technology. Seoul National University, Seoul, South Korea, July 30.
26. **Jun, S.** 2010. Ohmic heating: Applications and Future. CJ Cheiljedang Corporation, Seoul, South Korea, July 29.
27. **Jun, S.** 2010. Microwire sensing and combination heating technology. LG Electronics, Seoul, South Korea, July 29.
28. **Jun, S.** 2010. Innovative Technology for Food Processing and Safety: Carbon Nanotubes and Nanoneedle sensors. Department of Food Science and Technology, Sejong University, Seoul, South Korea, July 26.
29. **Jun, S.** 2010. Dielectrophoresis Force Driven Microscale Needle Device for Detection of Targeted Bacteria in Foods. The 77th Annual Meeting and International Symposium of Korean Society of Food Science and Technology (KoSFoST), June 16 -18, Songdo Convensia, Incheon, South Korea
30. **Jun, S.** 2009. Novel Food Processing Techniques: System design and Applications. Department of Biosystems & Biomaterials Science and Engineering, Seoul National University, South Korea, March 26.
31. **Jun, S.** 2007. Innovative Hydrophobic Surface Treatment Technology for Food Processing: PTFE-coated Carbon Nanotubes. The 74th Annual Meeting and International Symposium of Korean Society of Food Science and Technology (KoSFoST), June 20 - 22, Busan Exhibition and Convention Center (BEXCO), Busan, South Korea