

Shaojin Wang

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EDUCATION

- 1994-1998 Gembloux Agricultural University (Belgium)
Ph. D. in Agricultural and Biological Engineering
<http://www.fsagx.ac.be/>
- 1983-1986 Zhejiang University (P. R. China)
Master degree in Agricultural Engineering
<http://www.zju.edu.cn/>
- 1978-1982 Zhejiang University (P. R. China)
Bachelor degree in Agricultural Machinery

PROFESSIONAL EXPERIENCE

RESEARCH

- 2005-Present **Assistant Research Professor**, Department of Biological Systems Engineering
Washington State University, Pullman, WA
<http://www.wsu.edu/>
- 2000-2004 **Research Associate**, Department of Biological Systems Engineering
Washington State University, Pullman, WA
- 1998-1999 **Research Engineer**, Bio-environmental station, INRA, Avignon, France
<http://www.avignon.inra.fr/>
- 1991-1993 **Lecturer**, Department of Agricultural Engineering
Zhejiang University, Hangzhou, P. R. China
- 1989-1990 **Visiting Research Fellow**, Department of Physics
Gembloux Agricultural University, Gembloux, Belgium
- 1986-1989 **Assistant Lecturer**, Department of Agricultural Engineering
Zhejiang University, Hangzhou, P. R. China

RESEARCH GRANTS

- PI** Department of Biological Systems Engineering, Washington State University
- Awarded \$160,889 by a competitive grant from USDA-CSREES on 03/25/2008 (09/01/2008-08/31/2010)
 - Submitted to USDA-NRI on 12/19/2007 (\$397,246, 09/01/2008-08/31/2011)
 - Submitted to Washington Technology Centre (WTC) on 04/23/2008 (\$71,261, 07/01/2008-03/31/2009)
- Co-PI** Department of Biological Systems Engineering, Washington State University
- Awarded \$57,220 by Abbott Laboratories, Columbus, OH on 02/25/2008
 - Awarded \$335,000 by USDA-NRI on 05/04/2005 (No. 2005-35503-16223)
 - Awarded \$445,881 by USDA-CSREES on 06/11/2004 (No. 2004-51102-02204);

- Awarded \$71,846 by Potato Foundation in WA State on 05/20/2004 (No. 13S-3031-4303);
- Awarded \$130,000 by California Department of Food and Agriculture (CDFA) on 01/15/2003 (No. 02-0652);
- Awarded \$30,000 by IMPACT Center Federal Funds on 10/15/2001 (No. 11D-3024-6903);

Group Leader

- 2002-present Department of Biological Systems Engineering, Washington State University
- Assisted Dr. Juming Tang to supervise visiting professors, X. Yin, W. Guo, & Maria Elena Sosa Morales, and Ph.D. students, S. L. Birla and G. Tiwari

RESEARCH PROPOSALS

- 1999-2005 Department of Biological Systems Engineering, Washington State University
- Assisted (15% contributions) Dr. Tang in proposal writing, which was awarded \$1.2 million by USDA-IFAFS (04/15/00)
 - Assisted (55% contributions) Dr. Tang in proposal writing, which was awarded \$350,000 by BARD (05/25/01)
 - Assisted (15% contributions) Dr. Tang in proposal writing, which was awarded \$190,000 by USDA- IREECGP (07/15/01)
 - Assisted (25% contributions) Dr. Tang in proposal writing, which was awarded \$23,000 by California Walnut Commission (04/25/01)
 - Assisted (15% contributions) Dr. Tang in proposal writing, which was awarded \$150,000 by USDA-IREECGP (09/01/01)
 - Assisted (45% contributions) Dr. Tang in proposal writing, which was awarded \$25,000 every year by IMPACT Center Federal Funds (2000-2003)

TEACHING

- 2005-present **Assistant Research Professor**, Biological Systems Eng., Washington State Univ.
- Assisted to supervise Ph.D. student, G. Tiwari
 - Taught 3h for 3-credit class BsyeE 484/584: Thermal Processing of Foods
- 2002-2005 Department of Biological Systems Engineering, Washington State University
- Assisted to supervise Ph.D. student, Sohan L. Birla
 - Provided three technical training courses (4h each) for USDA-ARS in Hilo, HI, Weslaco, TX and Parlier, CA
- 1999-2001 Department of Biological Systems Engineering, Washington State University
- Assisted Dr. Juming Tang to supervise Ph.D. student, K. Luechapattanaorn
 - Assisted Dr. Tang to supervise master student, Y. Rodriguez
- 1998-1999 **Research Engineer**, Bio-environmental station, INRA, Avignon, France
- Assisted Dr. T. Boulard to supervise Ph.D. student, R. Haxaire
- 1991-1993 **Lecturer**, Department of Agricultural Engineering
Zhejiang Agricultural University, Hangzhou, P. R. China
- Classes taught: *Instrumentation for environmental physiology* for undergraduate students
 - Classes taught: *Principles of environmental engineering* for graduate students
- 1986-1989 **Assistant Lecturer**, Department of Agricultural Engineering
Zhejiang Agricultural University, Hangzhou, P. R. China
- Classes taught: *Principles of Agricultural and Bioenvironmental Engineering* for undergraduate students

- Supervised eleven senior undergraduates in their graduation projects

INSTRUMENTATION

Experienced in using: 915 MHz microwave and 27 MHz radio frequency (RF) heating systems, thermal imaging camera, Campbell and Delta-T data acquisition systems, HP network and Impedance analyzers, sonic anemometer, fiber optical temperature measurement system, thermocouples, and thermal resistance sensors, and solar radiation measurement facilities

COMPUTER SKILL

Systems: UNIX, Windows

Languages: FORTRAN, BASIC, ALGOL, HTML, JAVA

Applications: Sigma Plot, MS Office, WordPerfect, Quattro Pro, MatLab, FEMLAB, Paintbrush, CFD2000, TRNSYS, Flowchart

CLASSES AUDITED AT WSU

Spring, 2000. ENTOM 340: Agricultural Entomology

Fall, 2000. EE 331: Electromagnetic Fields and Waves

Spring, 2001. CPTS 253: JAVA Program

Fall, 2001. BSYSE 584: Thermal Processing of Foods

Fall, 2002. BSYSE 581: Advanced Physical Properties of Foods

PROFESSIONAL AFFILIATION

1. American Society of Agricultural and Biological Engineers (ASABE) (since 2000)
2. International Society for Horticultural Science (ASHS) (since 1999)
3. Asian Association for Agricultural Engineering (AAAE) (2002)
4. Association of Overseas Chinese Agricultural, Biological, and Food Engineers (AOCABFE) (since 2001)
5. International Microwave Power Institute (IMPI) (since 2007)

SERVICE IN PROFESSIONAL ASSOCIATION

2007-Present Associate Editor of Food Processing Engineering Division in Transactions of the ASABE
Board member at Large of AOCABFE
Technology Cooperation Director of AOCABFE
FPE-703 Food Processing Committee member of ASABE

2007 Co-organized a USDA Regional Project (NE-1008) meeting on postharvest technologies in the Tri-Cities on June 6 and 7. Attendees from nine different states, USDA-ARS, and Japan visited potato, cherry, hop processing/packaging plants, and WSU viticulture research fields and a winery in central Washington.

2005-2007 FPE04/041 Publication Committee member of ASABE
Editor-in-chief of IMPACT Newsletter of AOCABFE
<http://www.aoc-web.org/newsletter.htm>

2003-2005 Treasurer of AOCABFE

1997-1998 Editor-in-chief of a Newsletter (LBTX) for Chinese Student and Scholar Association in Belgium

REVIEWER

Technical reviewer for the USDA-SBIR proposals in 2005.

Technical reviewer for the following journals (total review paper numbers):

Acta Horticulture (1)

Applied Engineering in Agriculture (1)
Bioresource Technology (1)
Biosystems Engineering (9)
Computers and Electronics in Agriculture (2)
HortTechnology (1)
International Agricultural Engineering Journal (1)
Journal of Agricultural Engineering Research (2)
Journal of Economic Entomology (1)
Journal of Food Engineering (6)
Journal of Food Science (5)
Journal of Zhejiang University Science (2)
Postharvest Biology and Technology (2)
Transactions of the ASABE (13)

AWARDS AND HONOR

2006-2008 Chaired one session in microwave and radio frequency heating in agricultural and food processing (FPE-12) in ASABE Annual International Meetings each year

2004 Chaired two sessions in physical properties and food safety in 1st International Conference of CIGR, Section VI: Bioproducts processing and Food Safety, October 11-14, 2004, Beijing, China.

2004 ASABE Superior Paper Award (top 2.5%) from American Society of Agricultural and Biological Engineers.
http://www.asabe.org/awards/paper/2004_Superior_Paper_Winners.htm

2002 Chaired a session in post-harvest and food engineering in 7th IAEC, Wuxi, China, November 28-30, 2002.

2000 Best Paper Award (top one each year) from American Society for Plasticulture.
http://www.plasticulture.org/about_awards.htm

1998 Grand distinction for my original Ph.D. dissertation received from Gembloux Agricultural University (Belgium)

1994-1998 Awarded a scholarship for my Ph.D. study from Gembloux Agricultural University (Belgium)

1991 Awarded the 3rd Prize for the paper published in Bull. Rech. Agron. Gembloux, 25(4), 1990" by the Zhejiang Committee of Science and Technology (P. R. China)

1989-1990 Awarded a scholarship for the cooperative project between Belgium and China from Belgium French Community

PUBLICATIONS

Books

Tang J., Mitcham E., **Wang S.**, Lurie S. [Eds.], 2007. Heat Treatments for Postharvest Pest Control: Theory and Practice. CABI Publishing, Oxon, UK. 368pp.

Book Chapters

Tang J., **Wang S.**, Armstrong J.W., 2007. Thermal treatment protocol development and scale-up. In: Tang J., Mitcham E., **Wang S.**, Lurie S. [Eds.], 2007. *Heat Treatments for Postharvest Pest Control: Theory and Practice*. CABI Publishing, Oxon, UK, pp. 291-310.

Tang J., **Wang S.**, 2007. Temperature measurement. In: Tang J., Mitcham E., **Wang S.**, Lurie S. [Eds.], 2007. *Heat Treatments for Postharvest Pest Control: Theory and Practice*. CABI Publishing, Oxon, UK, pp. 56-78.

Tang J., **Wang S.**, 2007. Fundamental heat transfer theory for thermal treatments. In: Tang J., Mitcham E., **Wang S.**, Lurie S. [Eds.], 2007. *Heat Treatments for Postharvest Pest Control: Theory and Practice*. CABI Publishing, Oxon, UK, pp. 27-55.

- Komarov, V., **Wang S.**, Tang J., 2005. Permittivity and measurement. In: K. Chang (eds.). *The Wiley Encyclopedia of RF and Microwave Engineering*, John Wiley & Sons, Inc., New York, Vol. 4, pp. 3693-3711.
- Tang J., **Wang S.**, 2005. Radio frequency treatments for insect control in fruits and nuts - principles and applications. In: R. Dris (Eds), *Crops: Growth, Quality and Biotechnology*. WFL Publisher, Helsinki, Finland, P967-990.
- Wang S.**, Tang J., Younce F., 2003. Temperature measurement. In: D. R. Heldman (eds.). *Encyclopedia of Agricultural, Food, and Biological Engineering*, Marcel Dekker. New York. P987-993.

Selected Papers in Refereed Journals:

- Wang Y., Tang J., Rasco B., **Wang S.**, Alshami A.A., Kong F., 2008. Using whey protein gel as a model food to study the dielectric heating of salmon fillets. *LWT - Food Science and Technology*, in review.
- Guo W., Tiwari G., Tang J., **Wang S.**, 2008. Frequency, moisture and temperature dependent dielectric properties of chickpea. *Biosystems Engineering*, in review.
- Birla S.L., **Wang S.**, Tang J., Tiwari G., 2008. Characterization of radio frequency heating of fresh fruits influenced by dielectric properties. *Journal of Food Engineering*, accepted.
- Tiwari G., **Wang S.**, Birla S.L., Tang J., 2008. Effect of water assisted radio frequency heat treatment on the quality of 'Fuyu' persimmons. *Biosystems Engineering*, in press.
- Wang S.**, Yue J., Chen B., Tang J., 2008. Treatment design of radio frequency heating based on insect control and product quality. *Postharvest Biology and Technology*, in press.
- Wang S.**, Luechapattaporn K., Tang J., 2008. Experimental methods for evaluating heating uniformity in radio frequency systems. *Biosystems Engineering*, 100(1): 58-65.
- Li W., Zhang M., **Wang S.**, 2008. Effect of three-stage hypobaric storage on membrane lipid peroxidation and activities of defense enzyme in green asparagus. *LWT - Food Science and Technology*, in press.
- Li T., Zhang M., **Wang S.**, 2008. Effects of temperature on *Agroclybe chaxingu* quality stored in modified atmosphere packages with silicon gum film windows. *LWT - Food Science and Technology*, 41(6): 965-973.
- An J., Zhang M., **Wang S.**, Tang J., 2008. Physical, chemical and microbiological changes in stored green asparagus spears as affected by coating of silver nanoparticles-PVP. *LWT - Food Science and Technology*, 41(6): 1100-1107.
- Wang Y., Tang J., Rasco B., Kong F., **Wang S.**, 2008. Dielectric properties of salmon fillets as a function of temperature and composition. *Journal of Food Engineering*, 87(2): 236-246.
- Birla S.L., **Wang S.**, Tang J., 2008. Computer simulation of radio frequency heating of model fruit immersed in water. *Journal of Food Engineering*, 84: 270-280.
- Zhang M., Zhan Z., **Wang S.**, Tang J., 2008. Extending shelf-life of asparagus spears by pressured mixed gases of argon and xenon. *LWT - Food Science and Technology*, 41(4): 686-691.
- Wang S.**, Monzon M., Johnson J.A., Mitcham E.J., Tang J., 2007. Industrial-scale radio frequency treatments for insect control in walnuts: II. Insect mortality and product quality. *Postharvest Biology and Technology*, 45(2): 247-253.
- Wang S.**, Monzon M., Johnson J.A., Mitcham E.J., Tang J., 2007. Industrial-scale radio frequency treatments for insect control in walnuts: I. Heating uniformity and energy efficiency. *Postharvest Biology and Technology*, 45(2): 240-246.
- Chung H., **Wang S.**, Tang J., 2007. Influence of heat transfer in test tubes on measured thermal inactivation parameters for *Escherichia coli*. *Journal of Food Protection*, 70(4): 851-859.
- Li T., Zhang M., **Wang S.**, 2007. Effects of modified atmosphere packaging with a silicon gum film as a window for gas exchange on *Agroclybe chaxingu* Huang storage. *Postharvest Biology and Technology*, 43(3): 343-350.
- Clary C.D., Mejia-Meza E., **Wang S.**, Petrucci V.E., 2007. Improving grape quality using microwave vacuum drying associated with temperature control. *Journal of Food Science*, 72(1): E023-E028.

- Zhang M., Tang J., Mujumdar A.S., **Wang S.**, 2006. Trends in microwave-related drying of fruits and vegetables. *Trends in Food Science & Technology*, 17: 527-534.
- Wang S.**, Tang J., Sun T., Mitcham E.J., Koral T., Birla S.L., 2006. Considerations in design of commercial radio frequency treatments for postharvest pest control in inshell walnuts. *Journal of Food Engineering*, 77(2): 304-312.
- Wang S.**, Birla S.L., Tang J., Hansen J.D., 2006. Postharvest treatment to control codling moth in fresh apples using water assisted radio frequency heating. *Postharvest Biology and Technology*, 40(1): 89-96.
- Wang S.**, Monzon M., Gazit Y., Tang J., Mitcham E.J., Armstrong J.W., 2005. Temperature dependent dielectric properties of selected subtropical and tropical fruits and associated insect pests. *Transactions of the ASABE*, 48(5): 1873-1881.
- Birla S.L., **Wang S.**, Tang J., Fellman J., Mattinson D., Lurie S., 2005. Quality of oranges as influenced by potential radio frequency heat treatments against Mediterranean fruit flies. *Postharvest Biology and Technology*, 38(1): 66-79.
- Clary C.D., **Wang S.**, Petrucci V.E. 2005. Fixed and incremental levels of microwave power application on drying grapes under vacuum. *Journal of Food Science*, 70(5): E344-E349.
- Wang S.**, Yue J., Tang J., Chen B., 2005. Mathematical modeling of heating uniformity of in-shell walnuts in radio frequency units with intermittent stirrings. *Postharvest Biology and Technology*, 35(1): 97-107.
- Birla S.L., **Wang S.**, Tang J., Hallman G., 2004. Improving heating uniformity of fresh fruits in radio frequency treatments for pest control. *Postharvest Biology and Technology*, 33(2): 205-217.
- Wang S.**, Tang J., Cavalieri R.P., Davis D., 2003. Differential heating of insects in dried nuts and fruits associated with radio frequency and microwave treatments. *Transactions of the ASABE*, 46(4): 1175-1182. (ASABE Superior Paper Award)
- Wang S.**, Tang J., Johnson J.A., Mitcham E., Hansen J.D., Hallman G., Drake S.R., Wang Y., 2003. Dielectric properties of fruits and insect pests as related to radio frequency and microwave treatments. *Biosystems Engineering*, 85(2): 201-212.
- Wang S.**, Tang J., Johnson J.A., Mitcham E., Hansen J.D., Cavalieri R., Bower J., Biasi B., 2002. Process protocols based on radio frequency energy to control field and storage pests in in-shell walnuts. *Postharvest Biology and Technology*, 26(3): 265-273.
- Wang S.**, Tang J., Cavalieri R., 2001. Modeling fruit internal heating rates for hot air and hot water treatments. *Postharvest Biology and Technology*, 22(3): 257-270.
- Wang S.**, Ikediala J.N., Tang J., Hansen J., Mitcham E., Mao R., Swanson B., 2001. Radio frequency treatments to control codling moth in in-shell walnuts. *Postharvest Biology and Technology*, 22(1): 29-38.
- Tang J., Ikediala J.N., **Wang S.**, Hansen J., Cavalieri R., 2000. High-temperature-short-time thermal quarantine methods. *Postharvest Biology and Technology*, 21: 129-145.

Proceedings and Conference Communications:

- Sosa-Morales M.E., Tiwari G., **Wang S.**, Tang J., Lopez-Malo A. and Garcia H.S., 2008. *Radio frequency heating as a potential post-harvest treatment of mangoes*. Proceeding of 42nd Annual Microwave Symposium-presented by International Microwave Power Institute, June 26-28, 2008, New Orleans, Louisiana, USA.
- Tiwari G., **Wang S.**, Tang J., 2008. *Computer simulation of radio frequency heating of wheat flour*. Proceeding of 42nd Annual Microwave Symposium-presented by International Microwave Power Institute, June 26-28, 2008, New Orleans, Louisiana, USA.
- Sosa-Morales M.E., Tiwari G., **Wang S.**, Tang J., Lopez-Malo A. and Garcia H.S., 2008. *Influence of the storage time on the dielectric properties of mango*. In: 2008 ASABE Annual International Meeting – June 29-July 2, 2008 – Providence, Rhode Island. ASABE, St. Joseph, MI, USA. 10p.

- Guo W., Tiwari G., Tang J., **Wang S.**, 2008. *Dielectric properties of chickpea*. In: 2008 ASABE Annual International Meeting – June 29-July 2, 2008 – Providence, Rhode Island. ASABE, St. Joseph, MI, USA. 10p.
- Tiwari G., **Wang S.**, Birla S.L., Tang J., 2008. *Effect of water assisted radio frequency heat treatment on the quality of 'Fuyu' persimmons*. In: 2008 ASABE Annual International Meeting – June 29-July 2, 2008 – Providence, Rhode Island. ASABE, St. Joseph, MI, USA. 10p.
- Wang S.**, Yue J., Tang J., Chen B., 2008. *Treatment design of radio frequency heating based on insect control and product quality*. In: 2008 ASABE Annual International Meeting – June 29-July 2, 2008 – Providence, Rhode Island. ASABE, St. Joseph, MI, USA. 10p.
- Wang S.**, Tang J., Mitcham E., Armstrong J., 2007. *Improved quarantine treatments for tropical fruit using thermal energy*. In: USDA-NRI 71.1 Project Director's Meeting, August 7-8, 2007, Washington D.C.
- Wang S.**, Yue J., Chen B., Tang J., 2007. *Optimal intermittent mixings of radio frequency treated crops based on insect control and product quality*. Proceeding of 41st Annual Microwave Symposium-presented by International Microwave Power Institute, August 1-3, 2007, Vancouver, Canada, pp. 135-139.
- Wang S.**, Tang J., 2007. *Heating uniformity and differential heating of insects in almonds in radio frequency systems*. In: 2007 ASABE Annual International Meeting – June 17-20, 2007 – Minneapolis, Minnesota. **Paper No. 076019**. ASABE, St. Joseph, MI, USA. 10p.
- Clary C.D., Mejia-Meza E., **Wang S.**, Petrucci V.E., 2007. *Improving grape quality using microwave vacuum drying associated with temperature control*. In: 2007 ASABE Annual International Meeting – June 17-20, 2007 – Minneapolis, Minnesota. **Paper No. 076016**. ASABE, St. Joseph, MI, USA. 9p.
- Birla S.L., **Wang S.**, Tang J., 2007. *Design feasibility of continuous radio frequency heating process for fresh fruits disinfection*. In: 2007 ASABE Annual International Meeting – June 17-20, 2007 – Minneapolis, Minnesota. **Paper No. 076020**. ASABE, St. Joseph, MI, USA. 10p.
- Johnson J.A., Mitcham E., Monzon M., **Wang S.**, Tang J., 2006. *Non-chemical alternatives to fumigation for postharvest dried fruits and nuts*. Proceeding of International Conference on the Future of Agriculture: Science, Stewardship, and Sustainability. August 7-9, 2006, Sacramento, CA.
- Wang S.**, Tang J., 2006. *Radio frequency treatments to control pests in walnuts and other materials for international trade*. Symposium on invasive species, August 15-18, 2006, Urumqi, China.
- Birla S.L., **Wang S.**, Tiwari G., Tang J., 2006. *Characterization of heating of spherical fruit in parallel plate radio frequency system*. The International Microwave Power Institute's 40th Annual Microwave Symposium, August 9-11, 2006, Boston, Massachusetts.
- Birla S.L., **Wang S.**, Tang J., 2006. *Radio frequency heating patterns in fruit as influenced by dielectric properties of constituent parts of fruit*. In: 2006 ASABE Annual International Meeting – July 9-12, 2006 – Portland, Oregon.
- Wang S.**, Monzon M., Johnson J.A., Mitcham E., Tang J., 2006. *Industrial-scale radio frequency treatments for insect control in in-shell walnuts*. In: 2006 ASABE Annual International Meeting – July 9-12, 2006 – Portland, Oregon. **Paper No. 066046**. ASABE, St. Joseph, MI, USA. 10p.
- Wang S.**, Tang J., 2006. *Industrial-scale radio frequency treatments for insect control in in-shell walnuts*. 2006 NE-1008 Regional Meeting on Postharvest Technology, July 6-7, 2006, Tri-cities, WA.
- Birla S.L., **Wang S.**, Tang J., Tiwari G., 2006. *Simulation of radio frequency heating of fresh fruit*. IFT Annual Meeting & IFT Food Expo, June 24 - 28, 2006, Orlando, FL
- Wang S.**, Monzon M., Tang J., Johnson J.A., Mitcham E., 2005. *Large-scale radio frequency treatments for insect control in walnuts*. Proceedings of 2005 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reduction, San Diego, CA, October 31 - November 3, 2005.

- Chapalamadugu K., Nelson M., Busboom J., Jasmer, D., Hancock D., Tang J, **Wang S.**, 2005. *Bovine Cysticercosis*. Washington Cattle Feeders Association Conference. August 10-12, 2005. Stevenson,, WA.
- Wang S.**, S.L. Birla, J. Tang, J.D. Hansen, 2005. *Treatment protocols to control codling moth in apples using radio frequency energy*. In: ASABE Annual International Meeting - July 17-20, 2005—Tampa, Florida, **Paper No. 056154**. ASABE, St. Joseph, MI, USA. 11p.
- Monzon M.E., Biasi B., **Wang S.**, Tang J., Hallman G., Mitcham E., 2004. *Effects of radio frequency heating on quality of persimmon and guava fruit as an alternative quarantine treatment*. Postharvest Unlimited 2004, Nov., 10-12, 2004, Sydney, Australia. *Acta Horticulture*, 687: 349-350.
- Birla S.L., **Wang S.**, Tang J., 2004. *Modeling radio frequency assisted hot water heating of spherical fruit*. International conference on "Emerging Technologies in Agricultural and Food Engineering", IIT Kharagpur, India, Dec. 14-17, 2004.
- Yue J., Chen B., **Wang S.**, Tang J., Cui Y., 2004. *Optimal number of stirrings in radio frequency treatments for in-shell walnuts to assure insect mortality standard*. 35th Annual Meeting of the Decision Science Institute, November 20-23, 2004, Boston, Massachusetts, USA.
- Wang S.**, Tang J., Sun T., Birla S.L., 2004. *Practical considerations on industrial implementation of radio frequency treatments on inshell walnuts*. In: 1st International Conference of CIGR, Section VI: Bioproducts processing and Food Safety, October 11-14, 2004, Beijing, China.
- Wang S.**, Tang J., 2004. *Temperature dependent dielectric properties of tropical fruits and insects*. In: ASABE/CSAE Annual International Meeting - August 01-04, 2004 – Ottawa, ON, Canada **Paper No. 046202**. ASABE, St. Joseph, MI, USA. 11p.
- Komarov V., Tang J., **Wang S.**, 2004. *Finite element modeling of electromagnetic field in an experimental RF heating system*. Sixth Seminar "Computer Modeling & Microwave Power Engineering", January 12, 2004, Austin, TX, USA.
- Tang J., **Wang S.**, 2003. *Dielectric properties related to radio frequency and microwave heating*. Conference on Food Engineering, 2003 AIChE Annual Meeting, November 16-21, San Francisco Hilton & Towers, San Francisco, CA, USA
- Monzon M.E., Biasi B., **Wang S.**, Tang J., Gazit Y., Mitcham E.J., 2003. *Effects of radio frequency heating on fruit quality of cherimoya, white sapote and avocado as an alternative quarantine treatment*. ASHS 100th annual International conference, Rhode Island, Oct. 3-6, 2003.
- Wang S.**, Tang J., 2003. *An experimental method for evaluating heating uniformity in RF systems*. In: 2003 ASABE Annual International Meeting - Las Vegas, Nevada, USA. Paper No. 036202. ASABE, St. Joseph, MI, USA. 11p.
- Wang S.**, Tang J., Hansen J.D., Johnson J.A., *Differential heating of insects in walnuts using radio frequency and microwave treatments*. In: 2002 ASABE/CIGR Annual International Meeting - July 28-31, 2002 – Chicago, Illinois. Paper No. 026002. ASABE, St. Joseph, MI, USA. 10p
- Wang S.**, Tang J., Johnson J.A., Mitcham E.A., Bower J., 2002. *Process protocols based on radio frequency energy to control insect pests in in-shell walnuts*. IFT Annual Meeting & IFT Food Expo, Anaheim, CA - June 15-19, 2002.
- Ikediala J.N., **Wang S.**, Tang J., 2001, *Heat treatment of large fruits – comparison of temperature distribution using conventional and RF with matched saline water Immersion methods*. In: ASABE Annual International Meeting. SACRAMENTO, CA, July 30-August 1. Paper No. 016169. ASABE, St. Joseph, MI, USA. 12p.
- Hansen J., Tang J., Ikediala J.N., **Wang S.**, 2000. *Development of radio frequency treatments for postharvest disinfestation of agricultural commodities*. 24th Annual Meeting of NAPPO (North American Plant Protection Organization) held in San Diego, CA, Oct. 16-20, 2000.
- Tang J., Ikediala J.N., **Wang S.**, Hansen J., Cavalieri R., 2000, *Novel thermal quarantine methods*. BARD workshop on post-harvest heat treatment held in Maagan, Israel, March 21-23, 2000.