

Josip Šimunović

Research Associate Professor of Food Science, North Carolina State University (NCSU), USA

e-mail: simun@ncsu.edu

Education:

B.S. Food Technology, Josip Juraj Strossmeyer University in Osijek (Croatia) 1978.

M.S. Food Science and Human Nutrition, University of Florida, Gainesville (USA) 1983.

Ph.D. Food Science, North Carolina State University, Raleigh, NC (USA) 1998.

Professional Experience:

1984-1988 Researcher, Faculty of Food Technology, JJS University in Osijek, Croatia

1989-1990 Project Manager, IQ Integrated Information Systems – IPK Osijek, Croatia

1990-1992 Associate Director, IQ Integrated Information Systems – IPK Osijek, Croatia

1992-1998 Graduate Research Assistant, Department of Food Science, North Carolina State University, Raleigh, NC, USA

1998-2001 Postdoctoral Research Associate, Department of Food Science, North Carolina State University, Raleigh, NC, USA

2001-2008 Senior Researcher, Department of Food Science, North Carolina State University, Raleigh, NC, USA

2008 – present Research Associate Professor, Department of Food Science, North Carolina State University, Raleigh, NC, USA

Research Interests: Continuous flow thermal sterilization, advanced thermal processing, microwave-assisted aseptic processing, particle flow monitoring and process validation in multiphase aseptic processing of foods and biomaterials, temperature and lethality detection, measurement and validation, advanced continuous flow cooling

Honors and Awards:

Fulbright Scholar 1981-1983, University of Florida, USA;

Elected to **Phi Kappa Phi** Honor Society, 1983; **Gamma Sigma Delta** The Honor Society of Agriculture, 1983; **Phi Tau Sigma** The Honor Society for Food Science, 2000;

Keller Award for Excellence in Research, 1999; NC State University Inventors Award, 2000, 2001, 2003, 2004, 2005, 2007, 2008, 2012; National Science Foundation 2007, 2009, 2011;

Compendiums of Industry-Nominated Technology Breakthroughs: Continuous Flow Microwave Processing

2008. American Society of Agricultural and Biological Engineers - FPSA Foundation - FPEI Food Engineering Award

2009. IFT Food Technology Industrial Achievement Award – Continuous Flow Microwave Sterilization of Low Acid Foods A/ARS Award for Superior Efforts in Technology Transfer

2012. Institute for Thermal Processing Specialists: Marvin Tung Award for Outstanding Achievement in Preservation and Packaging of Foods

2012. North Carolina State University: Innovator of the Year Award

Patents: 12 U.S. Patents Issued; 26 International Patents Granted;
6 U.S. Patents Pending; 32 Registered Inventions

Selected Publications

Brinley, TA, Stam, CN, Truong, VD, Coronel, P, Kumar, P, **Simunovic, J**, Sandeep, KP, Cartwright GD, Swartzel, KR, Jaykus, LA 2007. Feasibility of utilizing bio-indicators for testing microbial inactivation in sweetpotato purees processed with a continuous flow microwave system. J. Food Sci. 72(5): E235-E242.

Kumar, P, Coronel, P, **Simunovic, J**, Sandeep, KP 2007. Measurement of dielectric properties of pumpable food materials under static and continuous flow conditions. J. Food Sci. 72(4): E177-E183.

Jasrotia, AKS, **Simunovic, J**, Sandeep, KP, Palazoglu, TK, Swartzel, KR 2008. Design of Conservative Simulated Particles for Validation of a Multiphase Aseptic Process. J. Food Sci. 73 (5), E193-E202

Coronel, P, **Simunovic, J**, Sandeep, KP, Cartwright, GD, Kumar, P 2008. Sterilization solutions for aseptic processing using a continuous flow microwave system. J. Food Eng. 85(4): 528-536.

Koskineemi, CB, Truong, VD, **Simunovic, J**, McFeeters, RF 2011. Improvement of heating uniformity in packaged acidified vegetables pasteurized with a 915 MHz continuous microwave system. J. Food Eng.105:149-160.

Koskineemi CB, Truong VD, McFeeters RF, **Simunovic J** 2013. Quality evaluation of packaged acidified vegetables subjected to continuous microwave pasteurization. LWT. 54:157-164.