T9: Ninth Topical Conference on Food Engineering (CoFE 2005)

How To Use This Index: Scroll down or use the bookmarks in the navigation pane at left to move to a new location in this index. Click on a **blue paper title** to view that paper. To return to this index after viewing a paper, click the "Previous Menu" bookmark in the navigation pane.

Session 333 - Mathematical Modelling in Food Engineering - Tutorial

Chair: Kumar Mallikarjunan

333a Mathematical Modeling in Food Processing

Kumar Mallikarjunan Ashim K. Datta Sudhir K. Sastry Rosana Moreira

Session 339 - Transport Phenomena in Food Operations

Chair: Martin Okos

339a Salt Diffusion into Vegetable Tissue as a Pretreatment for Ohmic Heating

Sanjay S. Sarang Sudhir Sastry

339b Moisture Penetration into Sugar Glasses

Baomin Liang Yuping Shi Richard W. Hartel Eyal Ben-Yoseph

339c Characterizing Rheological Properties of Fluid Food Products

YoonKook Park Kyung C. Kwon Nader Vahdat Tristan J. Tinsley Paul Jones

339d A Mathematical Description of Bubble Growth in Bread Dough

Leaelaf M. Hailemariam Martin R. Okos Osvaldo H. Campanella

339e Modeling of Moisture Sorption Isotherms and Diffusivities of Coconut

Louis V. Nelson Martin R. Okos

Session 434 - Poster Session: Food Engineering Topical

Chair: Kasiviswanathan Muthukumarappan

434a Colorimetric Properties of Four Cuban Uniflorales Honeys

Yarima Garcia Fleites

434b Optimization of a Fluid Bed Dryer by Implementation of a Model Predictive Controller

Joshel Omar Rivera Carlos Velazquez

434c Model and Analysis of Vacuum Membrane Distillation for the Recovery of Volatile Aroma Compounds from Black Currant Juice

Vipasha Soni Jens Abildskov Gunnar E. Jonsson Rafiqul Gani

434d Evaluation of Grape Degradation in Must Using an Electronic Nose

Manuel Zarzo Cruz Garcerá Ana Isabel Padilla Abelardo Gutiérrez Enrique Moltó

434e Fluidization of Osmotically Dehydrated Small Fruits

Michele Marcotte Ali R. Taherian Stefan Grabowski Marcel Tanguay Reza M. Zareifard

434f A Study of Student Experience and Feedback on Web Based and Simulation Based Practicals Developed for a Process Engineering Module within Biosystems Engineering Francis Butler

Implications of Deliquescence in Food and Pharmaceutical Products

Adnan K. Salameh Lisa J. Mauer Lynne S. Taylor

434g

434h Effects of Processing Conditions and Formulation on Ice Crystallization in Scraped Surface Freezer

Ellen Drewett Richard Hartel

434i Functional and Rheological Properties of Mexican Cheeses

Hee-Joon Park

Kasiviswanathan Muthukumarappan

434j Study of Non-Thermal Plasma for Liquid Foods Pasteurization

Shaobo Deng Roger Ruan Paul Chen Dajiang Zhao

434k Effect of Buffer, Residual Lactose, Salt to Moisture Ratio and Storage on the Linear Viscoelastic Properties of Cheddar Cheese

Nehru Chevanan

Kasiviswanathan Muthukumarappan

Session 444 - Advances in Food Engineering

Chair:

Vice Chair: Hao Feng

The Transition from Agricultural and Food Engineering to Biosystems Engineering - an Irish

Perspective on This International Paradigm Shift

Francis Butler

444b Partial Hydrogenation of Vegetable Oil Using Membrane Reactor Technology

Devinder Singh Brent Dringenberg Peter Pfromm Mary Rezac

444c Relating Extensional Rheological Behaviour of Wheat Flour Dough with Bread

Baking Performance

Valentina Stojceska Anastasia Ktenioudaki Francis Butler Emer Gallagher

444d Effect of Manothermosonication (Mts) on Quality of Orange Juice

Joo Won Lee Hao Feng Mosbah Kushad

444e Smart Membranes for Flavor Delivery

Kevin A. Heitfeld Dale W. Schaefer

444f Keeping Juice Fresh and Safe

James E. Van Wyk

Session 499 - Engineering Food Processes for the Space Missions

Chair: Sudhir Sastry

499a Food Production and Solid Waste System for Advanced Life Support on Long-Term

Space MissionsArthur A. Teixeira
Jason L. Myhre
Bruce A. Welt

499b Reusable Pouch Development for Long Term Space Mission: Verification of Sterility Efficacy

in Terms of Thermal Distribution in 3d and Shelf Life Study of Food Package

Soojin Jun Sudhir Sastry

499c The Challenges in the Development of a Long Duration Space Mission Food System

Stephen French Michele Perchonok

499d Modeling and Design of a Mini Food Extruder with High Viscous Heat Generation

Guibing Chen Carlos Corvalan Osvaldo Campanella

Lisa Mauer Martin Okos

499e Influence of Irradiating Bulk Soybeans on Their Future Functional and Sensory Properties in Soyfood Processing

Lester A. Wilson Terri Boylston Michele Perchonok Stephen French Chiew-Ling Chia

Session 500 - Food Rheology

Chair:

Vice Chair: Christopher P Thielen

500a A Novel Non-Invasive Method to Measure Visco-Elastic Properties of Cereal Grains

during Processing
David Gonzalez

David Gonzaiez Behic Mert

Osvaldo Campanella

Martin Okos

500b The Fragility of Glassy Foods

Bharani Ashokan Jozef L. Kokini

500c A Novel Method to Measure the Thermo-Mechanical and Behavioral Properties of

Pharmaceutical and Biological Material Powders and Pastes

David Gonzalez Behic Mert

Osvaldo Campanella

500d Thin Film Stability with a Viscoelastic Air-Liquid Interface

Ganesan Narsimhan

Zebin Wang

500e Effects of Acetic Acid, Salt, and Sucrose on Rheological Properties of Fluid Milk

Tamara Floyd Kyung C. Kwon Tristan J. Tinsley Paul Jones

500f The Effect of Temperature, Moisture Content and Oil Content on Rheology of Soy Flour

Michelle Leung Martin Okos

Osvaldo Campanella

500g Molecular Organization, Topography and Phase Properties of Zein Films

Chithra Panchapakesan Monica K. Lau Hulya Dogan Graciela W. Padua Jozef L. Kokini

Session 554 - Physical Properties of Foods

Chair: Michele Marcotte

554a Thermophysical Properties of Processed Meat and Poultry Products

Michele Marcotte Ali R. Taherian

554b In Integrated Approach to Evaluate and Model Engineeering Properties of Biomaterials

Marc Le Maguer Michele Marcotte Hosahalli S. Ramaswamy Cristina Ratti Ken Darley

554c Unfolding Kinetics of Beta Lactoglobulin on Silica Nanoparticle Surface

Xiaoyu Wu

Ganesan Narsimhan

554d Thermal and Flow Properties of Fish Oils

Subramaniam Sathivel

554e Undesirable Phenomena Encountered during Food Powder Handling, Processing,

and Storage

Gustavo V. Barbosa-Canovas

Pablo Juliano

554f Wettability of Wax Particles Modified by Food Emulsifiers

Zebin Wang Ganesan Narsimhan Dennis Kim

Modeling of Adhesion and Granulation Endpoint of Food and Pharmaceutical Powders Based on Material Properties and Operating Conditions

Tona Ndamba Apitwat Amornpongchai Martin R. Okos David Nivens

Session 572 - High Pressure Processing

Chair: Bala Balasubramaniam

572a High Pressure Processing Beef: Comparison between Hydrodynamic and Hydrostatic Methods

Anand Lakshmikanth Kumar Mallikarjunan Morse Solomon Jitu Patel George Flick

572b Modeling Pressure and Thermal Sensitivity of Bacillus Amyloliquefaciens Spores in Mashed Egg Patties during Presure-Assisted Thermal Processing

S. Rajan J Ahn

V. M Balasubramaniam

A Yousef

C. P Dunne

572c High Pressure Thermal Sterilization of Precooked Egg Patties: Factors Affecting Preheating Efficiency

Gustavo V. Barbosa-Canovas

Pablo Juliano Tatiana Koutchma Bala Balasubramaniam J.W Mathews

572d Quasi-Chemical Kinetics Model and Statistical Secondary Models for the Inactivation of Escherichia Coli Atcc 11229 and Listeria Monocytogenes Osy - 8578 in Surrogate Foods by High Pressure Processing

Christopher J. Doona Florence E. Feeherry Edward W. Ross

572e High Pressure Destruction Kinetics of Psychrotrophic Microorganisms in Meat

Hosahalli S. Ramaswamy

Gabriel Piette

572f Microbial Retention and Membrane Fouling during Low Temperature Microfiltration of Skim Milk Using Ceramic Membranes

Julia de A. Fritsch Cosmin Beliciu Carmen I. Moraru

Session 592 - Thermal Processing of Food

Chair: Hosahalli S. Ramaswamy Vice Chair: Michele Maracotte

Heat Transfer Considerations in Thermal Processing with Container Agitation: Dual Mode

Axial Rotation Involving Particulates in Viscous Fluids

Hosahalli S. Ramaswamy Mritunjay Dwivedi Cuiren Chen

592b Volume Expansion of Cakes during Baking and Its Influence on the Quality

Michele Marcotte

592c Risk Assessment Modelling of Acrylamide in Potato Products Encompassing Thermal Processing and Other Process Stages

Enda J. Cummins Francis Butler Ronan Gormley Nigel Brunton

592d Comparative Study of Heat Penetration Parameters Using Miniature Remote Temperature Sensors Vs. T-Type Thermocouples

George B. Awuah Aakash Khurana Lisa M. Weddig Chris Balestrini

592e On-Line Correction of Process Temperature Deviations in Continuous Retorts

Guibing Chen Osvaldo Campanella Carlos Corvalan

Session 600 - Food Process and Product Development - Case Histories

Chair: Henry Schwartzberg Vice Chair: Robert Altomare

600a Improving the Operations and Efficiency of Processing ,Transport and Storage of Heat

Sensitive Materials Using a Nouvo Wireless Remote Monitoring and Control System

Gideon Zeidler

600b Evolution of Coffee Roasting

Henry G. Schwartzberg

600c Aseptic Processing and Packaging of Foods -- an Historical and Case Study

Dennis R. Heldman

600d Instant Coffee Crystals - Product and Process Development

Vijay K. Arora

600e Condensation Behavior in Warmly Packaged Pet Food Pellets

Rudolph J. Leschke

600f Scale-up and Start-up of a Meat Analog Product

Robert E. Altomare

Session 606 - Nonthermal Food Processing

Chair: David J. Geveke

606a Pulsed Light Inactivation of Listeria Innocua on Solid Surfaces – Substrate and Spectral

Range Effects
Sarah E. Woodling
Carmen I. Moraru

Nonthermal Inactivation of Escherichia Coli and Listeria Innocua in Apple Cider Using a

Novel Ultraviolet Light Apparatus

David J. Geveke

606c Experimental and Theoretical Challenges of Uv Dose Distribution Studies in Food Liquids

Tatiana Koutchma Brian Parisi Eduardo Patazca 606d Juice Irradiation with Taylor-Couette Flow

Zhengcai Ye Larry Forney John Pierson

606e Development of Pilot Scale Fluid Handling System with Energy Recovery for Pulsed Electric

Field Processing

Tony Jin

Howard Q. Zhang

606f Supercritical Carbon Dioxide Sterilization of Liquid Foods Using a Membrane System

John S. Novak

606g Genotoxicity of the Unique Radiolytic Product 2-Dodecylcyclobutanone

Christopher H. Sommers