

Monday, June 1 2009

- 8:00 **BREAKFAST-KELLOGG CENTER-Room 104AB**
- 8:30 **Greetings** *S. Udpa, Dean, College of Engineering, Michigan State University*
- 8:40 **ThermalHUB as a Community-Driven Resource for Everything Thermal,**
D. G. Walker, Vanderbilt University
- Session 1-Room 104AB: Math & Statistical Aspects of Inverse Problems
Co-Chairs: M. M. Meerschaert and L. Yang
- 9:10 **A posteriori parameter selection for local regularization,** *C. Brooks, P. K. Lamm*
- 9:28 **Parameter estimation for fractional transport,**
P. Chakraborty, M. M. Meerschaert, C. Y. Lim
- 9:46 **Energy error based numerical algorithms for Cauchy problems for nonlinear elliptic or time dependent operators,** *S. Andrieux, T. N. Baranger*
- 10:04 **Backward probabilities for contaminants undergoing fractional dispersion,**
Y. Zhang, M. M. Meerschaert, B. Baeumer
- 10:22 **BREAK**
- Session 2-Room 104AB: Inverse Heat Conduction Problems
Co-Chairs: R. L. McMasters and I. S. Wichman
- 10:45 **Using Derivative Regularization to Solve Inverse Heat Conduction Problems,** *R. L. McMasters*
- 11:03 **Inverse Estimation of Heat Transfer Coefficients in Heat Treating Process,**
S. K. Ali, M. S. Hamed, M. F. Lightstone
- 11:21 **Spherically Symmetric Droplet Evaporation,** *I. S. Wichman, P. R. Cole*
- 11:39 **Comparison of different solution techniques of the 2-D Steady State Inverse Heat Conduction Problem,** *F. Bozzoli, S. Rainieri, G. Pagliarini*
- 11:57 **Correction of Thermocouple Conduction Error and its Sensitivity to Thermal Property Selection,** *J. W. Woolley, K. A. Woodbury*
- 12:15 **LUNCH-KELLOGG CENTER-RED CEDAR A**
- Session 3-Room 104AB: Conduction Heat Transfer & Diffusion
Co-Chairs: C. Brooks and K. D. Cole
- 13:30 **Uncertainty Analysis for an Inverse Heat Conduction Problem,** *B. Blackwell, J. V. Beck*
- 13:48 **Anisotropic thermal property measurements by analytical Green's Function solution and steady-periodic heating,** *K. D. Cole, T. Tian*
- 14:06 **Novel Estimation of the Thermal Conductivity of Superconducting Niobium,** *N. T. Wright, S. K. Chandrasekaran, J. V. Beck*
- 14:24 **Measurement of Permeation Parameters of Hydrogen in HDPE,** *K. D. Cole, S. Prachumchong*
- 14:42 **Estimating Parameters and Uncertainty for Thermal Decomposition of A Highly Crosslinked Diallyl Phthalate Composite,** *K. Dowding, K. L. Erickson, A. L. Brundage*
- 15:00 **BREAK**
- Session 4-Room 104AB: Food & Bioprocessing
Co-Chairs: W. Liao and R. Lu
- 15:30 **Sequential estimation of kinetic parameters for nutraceutical degradation using the Arrhenius model,** *D. K. Mishra, K. D. Dolan, J.V. Beck*
- 15:48 **Thermal Inactivation Kinetics for Salmonella Enteritidis PT30 on Almonds Subjected to Moist-Air Convection Heating,** *S. Jeong, B. P. Marks, A. Orta-Ramirez*
- 16:06 **Coupled Mixing Flow and Mass Transfer Model for Pelletized Fungal Fermentation,**
W. Liao, Y. S. Liu, B. Wu
- 16:24 **Inverse Method to Estimate Microbial Inactivation Kinetic Parameters in Conduction-Heated Canned Foods,** *K. D. Dolan, L. Yang, C. P. Trampel*
- 16:42 **Estimation of Microbial Growth Parameters in Fresh Asparagus Packed in Modified Atmosphere Packaging and Vacuum Skin Packaging Microwaveable Trays,**
D. K. Mishra, K. D. Dolan, P. Benyathiar, B. Harte
- 19:00 **SYMPOSIUM BANQUET-KELLOGG CENTER-RED CEDAR ROOM**

Tuesday, June 2 2009

8:00 **BREAKFAST-KELLOGG CENTER-ROOM 104AB**

Session 5-Room 104AB: Tomography and Optimal Experimental Design

Co-Chairs: J. Qi and L. G. Raguin

- 8:30 **Application of Sensitivity Coefficients to Parameter Estimation and Intrinsic Verification,**
J. V. Beck, B. Blackwell
- 8:48 **Optimal Sensing Strategy Using Spatially Averaged Advection-Diffusion Parameter Estimation,**
J. Choi, A. P. White, L. G. Raguin
- 9:06 **Challenges in estimating biophysical properties of landscape from remotely sensed imagery,**
J. Qi
- 9:24 **Inverse elastic scattering with adaptive FE meshes,**
G. Puel, D. Aubry, A. L. Hamon
- 9:42 **Spline confidence bands for variance function,**
L. Yang, Q. Song

10:00 **BREAK**

Session 6-Room 104AB Biology and Medical Applications

Co-Chairs: N. T. Wright and S. Baek

- 10:30 **Downward continuation applied to magnetic immunoassays,**
E. C. Talarico, A. C. Bruno
- 10:48 **Automatic Rigging for Skeletal Animation,** *K. Hopkins*
- 11:06 **Parameter estimation of multi-fiber family models for biaxial mechanical behavior of arteries in the presence of the measurement errors,** *S. Baek, S. Zeinali-Davarani, J. Choi*
- 11:24 **Applying a Path-Dependent Model for Salmonella Thermal Inactivation in Slow-Cooked Turkey and Beef Products,** *M. I. Tenorio-Bernal, B. P. Marks, S. L. Jones*
- 11:42 **Optimizing Diffusion Tensor Imaging Protocol using a priori Structure Information: Experimental Validation** *Shantanu Majumdar, D. C. Zhu, S. S. Udpa, L. G. Raguin*

12:00 **LUNCH-KELLOGG CENTER-RED CEDAR B**

Session 7-Room 104AB: Non-Destructive Evaluation

Co-Chairs: P. Ramuhalli and L. Udpa

- 13:30 **Sensitivity Analysis of Pit Characterization Using Inverse Methods,**
J. C. Aldrin, H. A. Sabbagh, R. K. Murphy, E. H. Sabbagh
- 13:48 **Delamination Damage Detection of Concrete Bridge Decks using Enhanced Acoustic Method,**
G. Zhang, R. Harichandran, P. Ramuhalli
- 14:06 **Two-layer model for measuring the optical properties of turbid materials based on spatially resolved hyperspectral diffuse reflectance images,** *H. Cen, R. Lu*
- 14:24 **Confidence Metrics For Particle Filter Based Data Fusion,** *T. Khan, P. Ramuhalli, S. Dass*
- 14:42 **Solving Probabilistic Inverse Problems Using Factor Graph Analysis,**
M. Gu, Y. Liu, S. Chakrabartty

15:00 **BREAK**

Session 8- Room 104AB: Mechanics

Co-Chairs: B. Feeny and J. Choi

- 15:20 **Experimental Application of State-Variable Modal Decomposition for Modal Analysis,**
B. Feeny, U. Farooq
- 15:38 **Parameter Identification Strategies,** *X. Xiao, J. Tam, C. Hsieh*
- 15:56 **Optimization of Engineering Systems,** *R. Averill, M. Rademacher, R. Sidhu*
- 16:14 **An Analytical Series DC Motor Model from Experimental Test Data,**
C. J. Radcliffe
- 16:32 **Tool Heat Fluxes During Cutting of A360 Using Beck's Method**
S. C. McCarty, K. A. Woodbury, Y. K. Chou
- 16:50 **Closing Comments and Announcement of IPS 2010**