

# IUPUI IMAGING RESEARCH SYMPOSIUM – 2013

Wednesday, October 9, 2013  
IUPUI University Library, Lilly Auditorium  
10:00am – 4:30pm

## Welcome & Introductory Remarks

10:00 - 10:10 AM Gary D. Hutchins, PhD  
(*Chair, Imaging Research Initiative Council*)

Kody Varahramyan, PhD  
(*IUPUI Vice Chancellor for Research*)

## *IUPUI Imaging Resources* (Moderator: Mark R. Holland, PhD)

10:10 - 10:30 AM Gary D. Hutchins, PhD “Indiana Institute for Biomedical Imaging Sciences”

10:30 - 10:50 AM Kenneth W. Dunn, PhD “Indiana Center for Biological Microscopy”

10:50 - 11:10 AM Christoph A. Naumann, PhD “Nanoscale Imaging Center”

11:10 - 11:30 AM Katherine S. Kula, MS, DMD, MS “Three-Dimensional Imaging of the Craniofacial Complex Center”

11:30 - 11:50 AM Vincent H. Gattone II, PhD “Electron Microscopy Center”

11:50AM -1:30 PM **Lunch and Poster Viewing** (*Lilly Auditorium Lobby*)

## *Invited Speakers* (Moderator: Gary D. Hutchins, PhD)

1:30 - 2:15 PM Daniel C. Sullivan, MD “Quantitative Imaging in Medicine”  
(*Duke University Medical Center*)

2:15 - 3:00 PM Andrew J. Bowling, PhD “Imaging & Crop Development”  
(*Dow AgroSciences, Indianapolis*)

3:00 - 4:30 PM **IUPUI Imaging Laboratory Tours**

Guided tours through several IUPUI imaging laboratories will be available. Limited capacity – please sign up during *Lunch & Poster Viewing* time.

## 2013 IUPUI Imaging Research Symposium Posters

### **IUPUI Imaging Resources:**

1. "IUPUI Imaging Research Initiative", Mark R. Holland, Gary D. Hutchins
2. "IIBIS Research Development Initiative (RDI) Provides Funding Opportunities for IIBIS Core Services", Courtney R. Robbins, Gary D. Hutchins
3. "Indiana Center for Biological Microscopy", Ken Dunn, Malgorzata Kamocka and Seth Winfree
4. "Electron Microscopy Center", Caroline A. Miller and Vincent H. Gattone II
33. "Possibilities and Challenges of Small Animal Imaging on a 3T Clinical MRI System", Chen Lin, Jun Xu, Paul R. Territo and Gary D. Hutchins (ePoster)

### **Cancer Imaging:**

7. "Performance of a  $^{62}\text{Zn}/^{62}\text{Cu}$  Parent/Daughter Generator System, and a Kit-Based Radiopharmaceutical Synthesis Method, for PET Imaging with  $^{62}\text{Cu}$ ", Yen Ng, Carla J. Mathias, Jeffrey Lacy,\* and Mark A. Green
8. "Preparation of  $^{68}\text{Ga}$ -DOTA-NOC for Somatostatin-Receptor-Targeted PET/CT Tumor Imaging Under an Expanded Access IND", Mark A. Green, Carla J. Mathias, and James W. Fletcher
30. "Clinical Evaluation of Breast DCE-MRI with TWIST-Dixon Sequence", Yuan Le, Randall Kroeker, Hal D. Kipfer, Shadie S. Majidi, Stephanie Holz, Brian Dale, Chen Lin (ePoster)
31. "Comparison of Artifacts Caused by Biopsy Markers on Breast MRI with Different Fat Suppression Techniques", Yuan Le, Hal D. Kipfer, Shadie S. Majidi, Stephanie Holz, Chen Lin (ePoster)
32. "The Impact of Dixon Fat Suppression on Liver T1 and DCE Perfusion Quantification" Yuan Le, Fatih Akisik, Brian Dale, Karen Koons, Chen Lin (ePoster)

### **Cardiovascular & Pulmonary Imaging:**

6. "Determining Myocardial Fiber Structure of Intact Hearts In Vitro from Analyses of Echocardiographic Images", Mark R. Holland, Michelle L. Milne, Gautam K. Singh, James G. Miller
12. "Pulmonary Nodule CAD as a Second Reader: Influence on Radiology Residents", George Trilakis & Shawn Teague
13. "Development of Non-Invasive In Vivo Ultrasound Imaging Techniques for Elastase-Induced Experimental Abdominal Aortic Aneurysms", Evan H. Phillips, Alexa A. Yrineo, Elizabeth A. Nunamaker, Hilary D. Schroeder, Amy E. Bogucki, Craig J. Goergen
14. "Visualization of Complex Flow Patterns in Angiotensin II-Induced Dissecting Murine Abdominal Aortic Aneurysms with High Frequency Ultrasound", Shelby N. Abrams, Hilary D. Schroeder, Alexa A. Yrineo, Amy E. Bogucki, Craig J. Goergen

### **Cellular Imaging:**

5. "Imaging the HP1a Protein Interaction Network Inside Living Cells", Amanda Siegel, Nicole Hays and Richard N. Day

### **Craniofacial Imaging:**

15. *"Orthodontic Soft Tissue Parameters: A Comparison of CBCT and 3DMD"*, Tasha Metzger; Katherine Kula; George Eckert; Ahmed Ghoneima.
16. *"Three-Dimensional Airway Volumes and Most Constricted Areas in Children"*, EJ Ahn, K Kula, SS Liu, K Stewart, G Eckert, S Halum, JK Dillehay, F Eraso, A Ghoneima.
17. *"The Effect of Anterior Tooth Position on Trumpet Performance Quality"*, H.Z. Cilingir, A. Ghoneima, J. Dagg, and K. Kula

### **Neuroimaging:**

23. *"Negative Urgency and Ventromedial Prefrontal Cortex Responses to Alcohol Cues: fMRI Evidence of Emotion-Based Impulsivity"*, M. A. Cyders, M. Dzemidzic, W.J.A. Eiler, A. Coskunpinar, K.A. Karyadi, & D.A. Kareken
24. *"Hippocampal Transcriptome-Guided Gene-Gene Interaction of Memory Phenotype in MCI and AD"*, Jingwen Yan, Sungeun Kim, Kwangsik Nho, Rui Chen, Shannon L. Risacher, Jason H. Moore, Andrew J. Saykin, Li Shen
25. *"Network-Guided Sparse Learning for Improved MRI-based Prediction of Cognitive Performance"*, Jingwen Yan, Shannon L. Risacher, Sungeun Kim, Heng Huang, Andrew J. Saykin, Li Shen
26. *"TSPO Genotype Modulates in Vivo [11C]PBR28 Human Brain Uptake"*, AJ Saykin, K Nho, SL Risacher, S Kim, BC McDonald, TR MaGee, MR Farlow, JD West, L Shen, DP O'Neill, GD Hutchins, KK Yoder.
27. *"[18F]Fallypride Receptor Availability in Fibromyalgia"*, DS Albrecht, P MacKie, BT Christian, C Brown-Proctor, LM Federici, DA Kareken, CM Herring, JW Walters, KK Yoder.
28. *"Dopaminergic Coding for Alcohol-Related Negative Prediction Errors in Alcoholics but Not Social Drinkers"*, KK Yoder, DS Albrecht, CM Herring, DA Kareken.

### **Remote Sensing:**

18. *"Relating Socio-Spatial Variations to Heat Induced Mortality in Chicago, IL During the 1995 Extreme Heat Event"*, Austin Stanforth, Jeremy Webber, Dan Johnson, and Vijay Lulla
19. *"Urban Tree Canopy and Plantable Space Within NESCO"*, Dan Johnson, Steven M. King, Nan Ye, and Amanda Kabat
20. *"IUPUI Campus Tree Canopy 2012"*, Dan Johnson, Steven M. King, Nan Ye, and Amanda Kabat
21. *"Modeling Non-Levee Embankments Using LIDAR Imaging"*, Dan Johnson, Vijay Lulla, Ryan Stevens, Jeff Ashby

### **Signal & Image Processing:**

9. *"Three Dimensional Segmentation of Fluorescence Microscopy Images Using Active Surfaces"*, Kevin S. Lorenz, Paul Salama, Kenneth W. Dunn, and Edward J. Delp
10. *"Enhanced Non-Rigid Registration for Motion Artifact Reduction Within Microscopy Volumes"*, Kevin S. Lorenz, Paul Salama, Kenneth W. Dunn, and Edward J. Delp
11. *"Extracting Models from Biological Data"*, Steve Pressé
29. *"Autostereoscopic 3D Imaging for Bronchoscopy and Neurosurgery, Research in Imaging Methods and New Cameras"*, Lauren A. Christopher (ePoster)