

5th Annual Hopkins Imaging Conference

Hosted by the Hopkins Imaging Initiative
October 26, 2015

Schedule

11:00 AM – 1:00 PM

Poster Session and Lunch (Turner Concourse)

1:00 PM – 3:00 PM

First Lecture Session (Tilghman Auditorium)

1. 1:00 PM – 1:05 PM

Introduction

Dr. Jeffrey H. Siewerdsen

2. 1:05 PM – 1:50 PM

Imaging Radiation Dose and Molecular Expression in Cancer Tumors

Dr. Brian Pogue

Co-Director of Optics in Medicine at Dartmouth

3. 1:50 PM – 2:02 PM

Continuous High-Speed Compressed Sensing OCT

Jasper Stroud

4. 2:02 PM – 2:14 PM

High Speed Compressive Flow Microscopy

Bryan Bosworth

5. 2:14 PM – 2:26 PM

VESICLE: Volumetric Evaluation of Synaptic Interfaces using Computer Vision at Large Scale

William R. Gray Roncal

6. 2:30 PM – 3:00 PM

Blending People, Technology, and Algorithms into Deployable Systems for Healthcare

Dr. Gregory D. Hager

Director of the Computational Interaction and Robotics Lab (CIRL) at Johns Hopkins University

3:00 PM – 3:30 PM

Coffee Break (Turner Concourse)

3:30 PM – 5:30 pm

Second Lecture Session (Tilghman Auditorium)

7. 3:30 PM – 4:00 PM

The Exploration of Pluto and its Moons by NASA's New Horizons Mission

Dr. Harold A. Weaver, Jr.

Johns Hopkins Applied Physics Laboratory, Project Scientist on the New Horizons Mission

8. 4:00 PM – 4:12 PM

Scan-free single fiber imaging using compressed sensing and wavelength dependent scattering

Jaewook Shin

9. 4:12 PM – 4:24 PM Inexact Image Deblurring for Improved Quantitation in PET
Saeed Ashrafinia
10. 4:24 PM – 4:36 PM Image-based motion compensation for high-resolution extremities cone-beam CT
Dr. Alejandro Sisniega
11. 4:36 PM – 4:48 PM High Resolution CBCT with Blur and Correlated Noise Models in a Non-linear Reconstruction Algorithm
Steven Tilley
12. 4:48 PM – 5:00 PM MIND Demons for MR-to-CT Deformable Image Registration in Image-Guided Spine Surgery
Sureerat Reaungamornrat
13. 5:00 PM – 5:30 PM Cell Delivery Near the Bed: Are We There Yet?
Dr. Jeff W. M. Bulte
Director of Cellular Imaging, The Johns Hopkins Institute for Cell Engineering

5:30 PM – 6:00 PM

Awards Ceremony and Concluding Remarks

Posters

Poster	Presenter	Title
1	Jennifer Xu	Modeling of Imaging Performance for Photon Counting X-Ray Detectors
2	Jennifer Xu	Design and optimization of a CBCT head scanner for detection of acute intracranial hemorrhage
3	Dr. Rajat Mittal	Computed Tomography Image-based Diagnostics of Coronary Blood Flow
4	Sarah Ouadah	Self-Calibration of Cone-Beam CT Geometry Using 3D-2D Image Registration
5	Abhinav K. Jha*	Evaluating quantitative imaging methods with limited patient data
6	Jie Zhang	A 90 x 127 Compressively Sampled Wireless Video Camera Achieves 20x Compression using 4.3uW
7	Dr. Lin Su	Real-time ultrasound monitoring with speckle tracking in abdominal stereotactic body radiation therapy
8	Dr. Bernhard Fuerst	Can Intraoperative Ultrasound Assist TransOral Robotic Surgery?

9	Dr. Shahin Sefati	Learning Shared, Discriminative Dictionaries for Surgical Gesture Segmentation and Classification
10	Lingyao Meng	Computation of the Fisher information matrix in EM, with applications in imaging
11	Evan Schwab	Using Automatic HARDI Feature Selection, Registration and Atlas Building to Characterize the Neuroanatomy of A β Pathology
12	Elizabeth Sweeney	Relating multi-sequence longitudinal intensity profiles and clinical covariates in new multiple sclerosis lesions
13	John Muschelli	Automatic Segmentation of Gadolinium-Enhancing Lesions in Multiple Sclerosis
14	Jean-Philippe Fortin	Removing inter-subject technical variability in large neuroimaging studies
15	Yi Zhou	Tangential migration of neuronal precursors of glutamatergic neurons in the adult mammalian brain
16	Yung-Tian Gau	Novel Fiber-Optic Imaging Platform Reveals Behaviorally-Relevant Astrocyte Network Activation in the Brain of Freely-Moving Animals
17	Qianru Jin	Surface-composition imaging of mechanically trapped microparticles and single live cells
18	Travis Schmauss	The Influence of Foil Morphology on the Combustion Efficiency of Al/Zr Nanolaminates
19	Bin Ren	Exoplanetary Disks Revealed in the Archive of Space Telescope Imaging Spectrograph onboard the Hubble Space Telescope using the Karhunen-Loève Image Projection Algorithm
20	Dr. Marie Ygouf	Detection and characterization of exoplanets from simulated images of the future space telescope WFIRST-AFTA using a Principal Component Analysis based post-processing technique
21	Michael Peth	Classifications of CANDELS Galaxy Structure at $z \sim 1.5$ via Principal Component Analysis

*Retracted

Acknowledgements

Abstract Reviewers:

Dr. Eleni Liapi
Dr. Eric Frey
Dr. Michael Ghaly
Dr. Juan Ortuño
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Farhad Pashakhanloo
Mike Guttman
Amod Jog
Jennifer Xu
Jaymin Patel
Bradley Harden
Murat Bilgel
Hao Dang
Fatma El Shahaby

Poster Judges:

Dr. Eleni Liapi
Dr. Nicholas Durr
Dr. Hanzhang Lu
Dr. Tharindu De Silva
Dr. Aswin John Mathews
Evan Schwab
Fatma El Shahaby
Farhad Pashakhanloo

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