

# HARRINGTON SYMPOSIUM

## Optical Methods in Quantitative Bio-Imaging Concept to Application

Thursday, June 27<sup>th</sup>, 2024

5<sup>th</sup> Floor | Gary L. Thomas Energy Engineering Building

7:30 AM

Breakfast

8:30 AM

Opening Remarks

**Yoav Shechtman & Shwetadwip Chowdhury**, Conference Organizers

**Sharon Wood**, Executive Vice President and Provost

**Don Siegel**, Department Chair, Walker Department of Mechanical Engineering

9:00 AM

Session 1 | Chair, Yoav Shechtman

**Andrew Dunn**, The University of Texas at Austin

*In Vivo Microscopy of Microvasculature Following Brain Injury*

**Dvir Yelin**, Technion – Israel Institute of Technology

*Toward Noninvasive Blood Count*

**Charles Lin**, Massachusetts General Hospital and Harvard University

*Imaging the Hematopoietic System: From Blood Stem Cells to Mature Leukocytes*

10:30 AM

Break

11:00 AM

Session 2 | Chair, Andrew Dunn

**Francisco Robles**, Georgia Institute of Technology

*Accessible Optical Imaging Tools for Label-Free Molecular Imaging and 3D Microscopy*

**Adela Ben-Yakar**, The University of Texas at Austin

*LEAD Fluorescence Microscopy Performing at 100's kHz Frames Per Second for 3D-Imaging Flow*

*Cytometry and Brain Imaging*

**Melissa Skala**, University of Wisconsin-Madison

*Autofluorescence Imaging of Immune Cell Metabolism*

12:30 PM

Lunch

1:30 PM

Session 3 | Chair, Adela Ben-Yakar

**Seemantini Nadkarni**, Massachusetts General Hospital and Harvard University

*Wideband Micromechanical Mapping of the Extra-Cellular Matrix Landscape*

**James Tunnell**, The University of Texas at Austin

*Implantable SERS Biosensor for Monitoring Cancer Treatment Response*

**Amit Meller**, Technion – Israel Institute of Technology

*Electro-optical sensing of single protein biomarkers in nanopores and nanochannels: towards digital proteomics*

3:00 PM

Break

3:30 PM

Session 4 | Chair, James Tunnell

**Junjie Yao**, Duke University

*From Technology to Discovery: Deeper, Faster, and Colorful Photoacoustic Imaging in Life Sciences*

**Hafeez Dhalla**, Duke University

*The Inevitable Convergence of Robotics and OCT*

*Tribute to Joseph Izatt*

5:00 PM

Poster Session 1

2<sup>nd</sup> Floor, Gary L. Thomas Energy Engineering Building



The University of Texas at Austin

Cockrell School of Engineering

# HARRINGTON SYMPOSIUM

## Optical Methods in Quantitative Bio-Imaging Concept to Application

Friday, June 28<sup>th</sup>, 2024

5<sup>th</sup> Floor | Gary L. Thomas Energy Engineering Building

- 7:00 AM**      **Breakfast**
- 8:00 AM**      **Session 5 | Chair, Yoav Shechtman**  
**Alex Walsh**, Texas A&M University  
*Machine Learning to Enhance Metabolic Specificity of Autofluorescence Lifetime Imaging*  
**Shalin Mehta**, Chan Zuckerberg Biohub San Francisco  
*Mapping Cellular Dynamics of Viral Infection with Computational Microscopy and Deep Learning*  
**Laura Waller**, University of California, Berkeley  
*Computational Microscopy with Dynamic Samples*
- 9:30 AM**      **Break & Poster Session 2**  
2<sup>nd</sup> Floor, Gary L. Thomas Energy Engineering Building
- 11:00 AM**      **Session 6 | Chair, Shwetadwip Chowdhury**  
**Tomasz Tkaczyk**, Rice University  
*Technology for Integrated Optical Systems for Biomedical Diagnostics*  
**Elizabeth Hillman**, Columbia University  
*Harnessing the Power of High-Speed 3D Microscopy for Diverse Biomedical Applications*  
**Ed Boyden**, Massachusetts Institute of Technology  
*Optical Tools for Analyzing and Repairing Biological Systems*
- 12:30 PM**      **Closing Remarks**  
**Tyrone Porter**, Department Chair, Department of Biomedical Engineering  
**Yoav Shechtman & Shwetadwip Chowdhury**, Poster Winners Announced
- 12:45 PM**      **Lunch**



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