



SBI² High Content 2022

9th Annual Conference

September 18-20th, 2022.

Westin Copley Place, Boston MA. USA

Full program – at a glance:

Sunday, September 18th, 2022

Education Course Day

Timings TBC

Colloquium Title: *“Challenges and opportunities in imaging data integration and analytics”*
presented by:

- Gregory Way (Assistant Professor, University of Colorado): “Processing high-dimensional cell morphology representations with (opensource) pycytominer.
- Vivian Neilley (Product manager, Google Healthcare Data Engine): “Integrating Imaging with Cloud Longitudinal Records”
- Panel discussion.

Monday, September 19th, 2022

Exhibit Hall Open / Networking

7:00AM – 7:00PM

Keynote Presentation I

9:00AM – 10:00AM

IMAGE “Cancer Rearranges the Rules in Tissue Building Blocks. A New Class of Targets for Therapy?”

- Garry Nolan (Professor, Pathology - Baxter Laboratory, Stanford University)
- **Spotlight 1 –Visiopharm: “Discovering Meaningful Data in Multiplex Tissue Images Through Image Analysis”** Presented by Regan Baird
10:00AM – 10:15AM

Break for Coffee and Exhibit viewing

10:15AM – 10:45AM

Session I: Integration of Spatial Image-Omics with Data Analysis Tools Chairs: Don Apanovitch (Syngene), Sizun Jiang (Beth Israel Deaconess Medical Centre)	10:45AM – 1:00PM
Mapping the spatial architecture of human tissues in health and disease with Multiplexed Ion Beam Imaging - Erin McCaffrey (Stanford University)	10:45AM – 11:15AM
Leveraging Spatial Metabolomics and Artificial Intelligence for lung fibrosis Research - Ramon Sun (University of Florida)	11:15AM – 11:45AM
Matching cells across single cell modalities- from sequencing to imaging.	11:45AM – 12:15PM

- Bokai Zhu (Stanford University)	
Decoding and visualising tumour heterogeneity using interpretable AI - Heba Sailem (University of Oxford)	12:15PM – 12:45PM
Spotlight 2 – Zeiss: “FROM IMAGE TO RESULTS Automated Image Capture, Segmentation & Analysis of 3D-organoids using Machine-learning techniques Presented by Ryan Jacobs	12:45PM – 1:00PM

Lunch and exhibit viewing Spotlight 3 luncheon session - Genedata Imgence: “Current and Future Approaches to AI-powered Analysis of High-Content Screens”. Presented by Cameron Scott and Daniel Siegismund	1:00PM – 1:45PM
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Session II: Enhancing Translatability With Imaging: 3D models, co-culture and Organ-on-a-chip’ Chairs: Jason Ekert (GSK), Scott Cribbes (PerkinElmer)	1:45PM – 4:30PM
The microvasculature squeezes metastatic cancer cells to drive disease - Chris Bakal (Institute of Cancer Research)	1:45PM – 2:15PM
High-Throughput 3D Phenomics on a Beach - Andrei Georgescu (CEO Vivodyne)	2:15PM – 2:45PM
Spotlight 4 – ExpressCells "Multiplex Gene Tagging with CRISPR-Cas9 for Live High-Content Imaging" Presented by Oscar Perez-Leal MD (Temple University, School of Pharmacy)	2:45PM – 3:00PM
Break for Coffee and Exhibit viewing	3:00PM - 3:30PM
Imaging complex models in target discovery: Balancing information content with throughput - Erin Edwards (Assoc Director GSK)	3:30PM – 4:00PM
Short talks (selected from poster abstracts) - Exploring the Intricacies of DILI - Organoids, Liver Chips, and High-Content Imaging Charles Zhang (University of Michigan) - Scalable Hyperspectral Artificial Intelligence for Real time Colonoscopy William Oswald (University of South Alabama)	4:00PM – 4:30PM

Roundtable and Exhibit viewing 4:30PM – 5:30PM

Poster session - Exhibit viewing - Reception 5:30PM – 6:30PM

Tuesday, September 20th, 2022

Exhibit Hall Open / Networking ?:00AM – 6:00PM

Keynote Presentation II
Image

9:00AM – 10:00AM

“In Biology Structure Suits Function: A Mission to Decode Biology”

- Chris Gibson (CEO Recursion Pharma)

- **Spotlight 5 - PerkinElmer: “Providing Innovative Workflows to Advance Discovery Research”** Presented by Joe Trask

10:00AM – 10:15AM

Break for Coffee and Exhibit viewing

10:15AM – 10:45AM

Session III: Advances in High Content Imaging: Next Generation Phenotypic Screening Assays Chairs: Erin Edwards (GSK), David Shum (Institut Pasteur Korea), Steve Walker (Abbvie)	10:45AM – 1:00PM
Advancing Drug Discovery by Measuring Protein Dynamics through Single Particle Tracking - Daniel Anderson (CSO Eikon Therapeutics)	10:45AM – 11:15AM
Title TBC - Maria Vinci (Bambino Gesù Children’s Hospital–IRCCS)	11:15AM – 11:45AM
AI-enabled multiplexed cardiomyopathy and proarrhythmia in vitro KIC assay of human iPSC-cardiomyocytes for early drug development - Jeffrey Price (Scintillon Institute & Vala Sciences, Inc.)	11:45AM – 12:15PM
Short talks (selected from poster abstracts) <ul style="list-style-type: none">- Morphological trajectory inference: Tracking cell state transitions and small-molecule perturbations. Rebecca Hughes (University of Edinburgh)- Novel analysis method for in-situ spatial phenotyping of cell populations in multimarker imagery. Jim Mansfield (Visiopharm)	12:15PM – 12:45PM
Spotlight 6 – ThermoFisher: “Democratizing Multiparameter High-Content Screening Applications with the New CellInsight™ CX7 Pro Series”. Presented by Nick Radio	12:45PM – 1:00PM

Lunch and exhibit viewing

1:00PM – 1:45PM

Session IV: “Artificial Intelligence / Machine Learning in Biomolecular Imaging: Successes and Challenges’ Chairs: Greg Way (University of Colorado), Heba Sailem (University of Oxford)	1:45PM – 4:30PM
Unleashing the Morpholome - Maddison Masaeli (CEO DeepCell Bio)	1:45PM – 2:15PM
Interpretable machine learning in microscopy - Assaf Zariitsky (Ben-Gurion University of the Negev)	2:15PM – 2:45PM
Spotlight 7 - Araceli: “10x your lab: high content analysis meets high-throughput screening” Presented by Maggie Vantangoli Policelli	2:45PM – 3:00PM
Break for Coffee and Exhibit viewing	3:00PM - 3:30PM
AI for Precision Histopathology: The Road Ahead	3:30PM – 4:00PM

- Nasir Rajpoot (University of Warwick)	
Title TBC - Hold for President Award (or selected abstract)	4:00PM – 4:30PM

Roundtable, Poster and Exhibit viewing 4:30PM – 5:30PM

Awards Ceremony and meeting close 5:30PM – 5:45PM

SBI2 AGM (open to all attendees) 5:45PM - 6:15PM