

**Pathology
Informatics
Summit 2022**

**Innovate
Connect
Inspire**

MAY 9-12, 2022

PITTSBURGH, PA

Brought to you by the Association for Pathology Informatics

PathologyInformatics.org



PI SUMMIT 2022 EXHIBITORS

We gratefully acknowledge support from all of our exhibitors.

SEE EXHIBITOR MAP ON PAGE 34

DIAMOND

Hamamatsu

PLATINUM

Sunquest Information Systems

SILVER

Apollo

Corista

General Data Healthcare

Gestalt Diagnostics

INFINITT North America, Inc.

Leica Biosystems

Mikroscan

Philips Healthcare

Roche

Scopio Labs

SPOT Imaging

Visiopharm

NON-PROFIT

Digital Pathology Association

COPPER

Lab Improvements

SplIntellX

ACKNOWLEDGEMENT OF COMMERCIAL SUPPORT

COMMERCIAL SUPPORT

General Data Healthcare, Inc.
Two Travel Awards

Roche
Meeting Lanyards

Special thanks to CAP Today for Advertising Support

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GENERAL INFORMATION



CHECK-IN & REGISTRATION HOURS

Located in the Ballroom Gallery
Monday – Wednesday: 7am – 5pm
Thursday: 8am – 12pm

STAFF

Michelle Bisceglia	Ermi Palmieri
Grace Chae	Myra Rasul
Christina Dutzik	Nova Smith
Beth Gibson	

EXHIBITOR BALLROOM HOURS

Tuesday, May 10

10am – 12pm	OPEN (Break 10:20 – 11:20)
12pm – 1pm	LUNCH
1pm – 3pm	CLOSED
3pm – 4:30pm	OPEN (Break 3:45 – 4:15)
4:30pm – 5:30pm	CLOSED
5:30pm – to 7pm	OPENING RECEPTION

Wednesday, May 11

7am – 8am	BREAKFAST SERVICE
8am – 9:45am	CLOSED
9:45am – 11:30am	OPEN (Break 10:20 – 11:20)
11:30am – 12pm	CLOSED
12pm – 1:30pm	LUNCH
1:30pm – 3pm	CLOSED
3pm – 4:30pm	OPEN (Break 3:35 – 4:30)



WIFI NETWORK INFO

Username: API2022
 Password: PISUMMIT22



**ASSOCIATION FOR
 PATHOLOGY INFORMATICS**
 PATHOLOGY INFORMATICS SUMMIT

VISIT: pathologyinformatics.org
 MAIL: 4801 McKnight Road #1069, Pittsburgh PA 15237
 EMAIL: nova.smith@pathologyinformatics.org

WELCOME

Greetings and welcome to all of you. Thank you for joining us! The Pathology Informatics Summit 2022 is the 32nd year of a conference legacy resulting from the merger of two long-standing and successful previous conference series: APiII and Lab InfoTech Summit/AIMCL. Ok, there was a physical gap due to a pandemic, but who's counting? Altogether, the unified PI Summit series provides over 40 combined years of excellence in Pathology Informatics instruction and scholarly exchange for the pathology specialty.

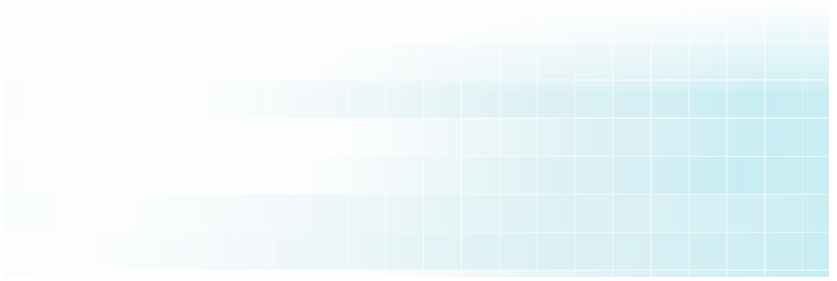
Over these four decades, we have witnessed a progressive succession of instruction topics, from fundamentals of computing and information technology to increasingly sophisticated content. The use of information technology has greatly enhanced both patient safety, laboratory efficiency, as well as diagnostic and predictive utility of laboratory data. With the continued adoption of Digital Pathology in combination with explosive growth of machine learning, this year's meeting promises to be both stimulating and exciting. We cordially welcome you back to the Pathology Informatics Summit 2022 brought to you by the Association for Pathology Informatics.

This year's conference builds on the strong legacy of past Summits, with some new features worth calling out. Continuing the tradition of hosting pre-conference activities, this year's meeting offers four exciting sequences: 1) Foundational Topics in Pathology and Clinical Laboratory Informatics, 2) The HIMA Imaging Science Workshop, and 3) An R Language Primer and Programming Symposium on Data Sciences. The fourth and final offering in the Monday evening session, is the Digital Pathology Association's Companion Meeting, entitled Hot Topics in Digital Pathology.

This year's opening plenary session focuses on the critical topic of information security at the enterprise and laboratory level. Inspired by a series of laboratory service disruptions, nationally and internationally, due to cybersecurity events, this timely topic will provide valuable lessons for the entire audience. Following this session, we change gears to advanced digital pathology, with a plenary on single cell analysis based on the work of Matthias Kretzler. Note that we will broadcast these sessions on zoom for the entire pathology community.

Finally, the meeting continues the tradition of offering two parallel tracks of short lectures on timely topics in the areas of Research and Applied Pathology Informatics as well as our offering both poster sessions and short scientific oral presentations, with the best of the latter category elevated to a third track of formal "promoted podium presentations". The meeting concludes on Thursday, with the annual API Focus Session: Analytics, Machine Learning, and Artificial Intelligence in the Clinical Laboratories. Refreshment and lunch breaks will provide you with ample time to browse the exhibitor ballroom, with displays by around 20 exhibitors with IT-related products and services, allowing you to gain a host of new ideas and solutions.

Pathology Informatics Summit 2022



“...over 40 combined years of excellence in Pathology Informatics instruction and scholarly exchange for the pathology specialty.”

Note that all the faculty’s PowerPoint lectures, along with synchronized audio, will be posted on the conference website (www.pathologyinformatics.org) three months after the conference adjourns and available to all API members. We invite you to take advantage of this rich educational resource in upcoming months, to reinforce what you will learn in the coming days of the Summit. The conference planning committee members will be available throughout the conference to solicit ideas from all of you about how the conference can be improved for our next Summit, which will be held on May 22-25, 2023, at the Pittsburgh Convention Center and adjacent Westin Hotel.

The Conference Planning committee and the API Governing Council is excited to welcome you back!

J. Mark Tuthill

Conference Director

David McClintock

Conference Planning Committee Member

Ulysses G. J. Balis

Conference Co-Director

Nova Marie Smith

Senior Conference Manager and Executive Director

Bruce A. Friedman

Conference Planning Committee Member

Beth Gibson

Assistant Conference Manager and CME Coordinator

Lisa-Jean Clifford

Conference Planning Committee Member

Grace Chae

Executive Assistant and Communications Specialist

THANK YOU TO OUR DIAMOND EXHIBITOR

HAMAMATSU

2022 SUMMIT OBJECTIVES

- Define the rapidly evolving field of Digital Pathology and showcase associated opportunities for an expedited adoption of new workflow models leveraging machine learning, artificial intelligence, and hardware solutions
- Understand and learn tenets of business analytics, machine learning and computational pathology
- Understand the various software and hardware products available in the clinical laboratory and pathology market by interacting with many exhibitors
- Understand the requirements to deploy informatics solutions in the clinical diagnostic laboratory
- Present new research in pathology informatics based on submitted competitive scientific abstracts
- Provide a forum for basic pathology informatics instruction for house officers and fellows in pathology training programs
- Provide updated best practices in the rapidly evolving area of digital pathology primary diagnosis

2022 TRAVEL AWARDEES

API and the 2022 PI Summit Planning Committee are pleased to have received financial support to fund the Travel Awards for trainees to attend. Awards are presented at the Travel Awardee Luncheon by the Co-Chairs of the API Training and Education Committee: Amrom Obstfeld, MD, PhD, Ronald Jackups, MD, PhD, and Toby Cornish, MD, PhD.

Alaaeddin Alrohaibani, MD

Oregon Health and Science University
Portland, OR

Vahid Azimi, MD

Washington University in St. Louis
St. Louis, MO

David Beyer MD, FRCPC

University of Alberta
Alberta, CAN

Sarah Dudgeon, MPH

Yale University
New Haven, CT

Daniel Gonzalez, MD

University of Pittsburgh Medical Center
Pittsburgh, PA

Qiangqiang Gu

Mayo Clinic
Rochester, MN

Mikael Haeggstroem, MD

Danbury Hospital
Danbury, CT

Patricia Hernandez, MD

Washington University in St. Louis
St. Louis, MO

Kyungmin Ko, MS, MD

Baylor College of Medicine /
Texas Children's Hospital
Houston, TX

Taryme Lopez Diaz, MD

University of Louisville
Louisville, KY

Waqas Mahmud, MD

Stony Brook University Hospital
Stony Brook, NY

Jitin Makker, MD

University of California Los Angeles
Los Angeles, CA

Chie Ohnishi, MS

Memorial Sloan Kettering Cancer Center
New York, NY

Nada Shaker, MD, MS

The Ohio State University Wexner
Medical Center
Columbus, OH

Nicholas Spies, MD

Washington University in St. Louis
St. Louis, MO

Charisse Liz Treece, MD

UCLA David Geffen School of Medicine
Los Angeles, CA

Masao Yoshida MD, PhD

Memorial Sloan Kettering Cancer Center
New York, NY

Nalan Yurtsever, MD

Zucker School of Medicine at Hofstra/
Northwell
Greenvale, NY

Xi Zhang MD, PhD

Washington University in St. Louis
St. Louis, MO

TRAVEL AWARD DONORS

Edward Klatt

Ulysses Balis
Michael Becich
Alexis Carter
Toby Cornish
Rajesh Dash
Monica De Baca

Ji Yeon Kim
Bruce Levy
Patrick Mathias
David McClintock
Amrom Obstfeld
Tushar Patel

Peter Perrotta
Danielle Pirrain
Michael Riben
Rodney Schmidt
John Sinard
S. Joseph Sirintrapun

Michelle Stoffel
Sahr Syed
Enrique Terrazas
Sara Wheeler
Christopher Williams
Jennifer Woo

Association for Pathology Informatics
General Data Healthcare
The Ohio State University, Department of Pathology



**Pathology
Informatics
Summit 2022**

**DAILY
SCHEDULES**



Monday, May 9, 2022

Pre-Conference Workshops

PI Bootcamp

Session Coordinators: Ronald Jackups, MD and Amrom Obstfeld, MD, PhD | Rooms: 301/302

7:00 – 8:00	BREAKFAST – BALLROOM GALLERY
8:00 – 8:10	Introduction to morning sessions
8:10 – 9:00	Databases and Data Management - <i>Peter Gershkovich, MD</i>
9:00 – 9:50	Fundamentals of Computer Programming - <i>Devereaux Sellers, MD</i>
9:50 – 10:10	REFRESHMENT BREAK
10:10 – 11:00	Data Analytics: Converting Data into Knowledge - <i>Michelle Stoffel, MD, PhD</i>
11:00 – 11:50	The Basics of Artificial Intelligence and Machine Learning - <i>Alexis Carter, MD</i>
11:50 – 12:00	Conclusion of morning sessions
12:00 – 1:00	LUNCH
1:00 – 1:10	Introduction to afternoon sessions
1:10 – 2:00	Data Analytics in Anatomic Pathology - <i>John Sinard, MD, PhD</i>
2:00 – 2:50	Enterprise Data Analytics: Adding Value to the System - <i>Bruce Levy, MD</i>
2:50 – 3:10	REFRESHMENT BREAK
3:10 – 4:00	So You Want to Make a Dashboard? - <i>Victor Brodsky, MD</i>
4:00 – 4:50	Practical Applications of Machine Learning in Pathology - <i>Shannon Haymond, PhD</i>
4:50 – 5:00	Conclusion of afternoon sessions



Monday, May 9, 2022

HIMA Imaging Science | All Day

Coordinator: Metin Gurcan, PhD | Room: Ballroom B

7:00 – 8:00	BREAKFAST – BALLROOM GALLERY
8:00 – 8:05	Introduction to HIMA - <i>Metin Gurcan, PhD</i>
8:05 – 8:55	Data-Efficient and Multimodal Computational Pathology - <i>Faisal Mahmood, PhD</i>
8:55 – 9:50	Lessons Learned in Digital and Computational Pathology - <i>Joe Sirintrapun, MD</i>
9:50 – 10:10	REFRESHMENT BREAK
10:10 – 11:05	Pathomics, Clinical Studies, and Cancer Surveillance - <i>Joel Saltz, MD, PhD</i>
11:05 – 12:00	Problems and Opportunities in Computational Renal Pathology - <i>Pinaki Sarder, PhD</i>
12:00 – 1:00	LUNCH
1:00 – 1:55	Image Analysis at the Crossroads of Digital and Molecular Pathology: Dissecting Complex Cancer Phenotypes Through Data Integration - <i>Beatrice Knudsen, MD, PhD</i>
1:55 – 2:50	AI for Routine Pathology Diagnostics: Are We There Yet? - <i>Anil Parwani, MD, PhD, MBA</i>
2:50 – 3:10	REFRESHMENT BREAK
3:10 – 5:00	Panel Discussion

R Language Primer and Programming Symposium on Data Sciences

Coordinator: Amrom Obstfeld, MD, PhD | Rooms: 303/304

7:00 – 8:00	BREAKFAST – BALLROOM GALLERY
8:00 – 8:10	General Introduction to the Workshop - <i>Amrom Obstfeld, MD, PhD</i>
8:10 – 9:50	Introduction to R and RStudio for Reproducible Reporting - <i>Joseph Rudolf, MD</i>
9:50 – 10:10	REFRESHMENT BREAK
10:10 – 12:00	Data Visualization - <i>Stephan Kadauke, MD, PhD</i>
12:00 – 1:00	LUNCH
1:00 – 2:50	Data Wrangling - <i>Amrom Obstfeld, MD, PhD</i>
2:50 – 3:10	REFRESHMENT BREAK
3:10 – 5:00	Data Understanding - <i>Patrick Mathias, MD, PhD</i>

Monday, May 9, 2022

Digital Pathology Association Companion Meeting

Hot Topics in Digital and AI Pathology 2022 | Evening Session

Coordinator: Anil Parwani, MD, PhD, MBA | Rooms: 301/302

Introduction/Opening Remarks	
5:00 – 5:20	Deploying AI Solutions for Clinical Diagnostics: Current State and Future Directions - <i>Anil Parwani, MD, PhD, MBA</i>
5:20 – 5:45	Pathologist Involvement in Deep Learning Models to Improve Clinical Adoption - <i>Beatrice Knudsen, MD, PhD</i>
5:45 – 6:10	Building Data Repositories for Wide-spread Digital Pathology Education and Research - <i>Rajendra Singh, MD</i>
6:10 – 6:35	Leveraging Data from the College of American Pathologists to Address Challenges in Machine Learning - <i>Michelle Stram, MD, ScM</i>
6:35 – 7:00	AI-based Pathology Predicts Origins for Cancers of Unknown Primary - <i>Faisal Mahmood, PhD</i>
Wrap-up/Closing remarks	

Mentoring Monday | Evening Session | 6:00 – 6:40pm

Host: Yonah Ziemba, MD

Rooms: 306/307 | hors d'oeuvres and drinks served at 5:30pm

Michael J. Becich, MD, PhD

- Chairman and Distinguished University Professor, Department of Biomedical Informatics
- Professor of Pathology, Information Sciences, Telecommunications and Clinical/Translational Sciences
- Associate Vice Chancellor for Informatics in the Health Sciences
- Associate Director for Cancer Institute (UPCI)
- Associate Director, Clinical and Translational Science Institute (CTSI)
- University of Pittsburgh School of Medicine

For Residents/Fellows: Mentoring Monday is an opportunity for trainees to learn about pathology informatics from well-known practitioners in the field

NO DINNER IS PROVIDED FOR MONDAY EVENING



Short Abstract Presentations | Running Concurrently | Morning Sessions

7:00 – 8:00	BREAKFAST - EXHIBITOR BALLROOM		
8:00 – 9:00	Moderator: <i>Ulysses Balis</i> Rooms: 301/302	Moderator: <i>David McClintock</i> Room: Ballroom B	Moderator: <i>Lisa-Jean Clifford</i> Rooms: 303/304
Morning Track Lectures			
	Track 1: Artificial Intelligence Rooms: 301/302 Moderator: <i>Steven Hart</i>	Track 2: Applied Informatics Room: Ballroom B Moderator: <i>S. Joe Sirintrapun</i>	Track 3: Becich-Friedman Distinguished Oral Presentations Rooms: 303/304 Moderator: <i>Michelle Stoffel</i>
9:00 – 9:35	Explainable AI (xAI) Applications in Pathology <i>Jeff Fine, MD</i>	Laboratory Information Systems 1972 to 2022 50 Years of Evolution, Revolution, Innovation, and Frustration <i>Dennis Winsten</i>	Automated Reporting of Critical Values Enabled by Development of a Web Based Application <i>Samuel McCash, MD</i>
9:35 – 9:45	Ten Minute Break to Switch Lectures		
9:45 – 10:20	A Proposed Framework for Deploying AI in the Clinical Laboratory <i>Jansen Seheult, MD</i>	Are We in Need of a Smart Laboratory Information System? <i>Snehal Sonawane, MBBS, MD, FASCP</i>	A Dynamically Generated Machine Learning Model to Identify Low Prevalence Sars-Cov-2 Samples for Pooled Pcr Testing <i>Andrew Laitman, MD, PhD</i>
10:20 – 11:20	Break, Browse Exhibits, and Poster Session		
11:20 – 12:00	Development of AI/ ML Models for Tumor Classification Using Google AutoML Vision API <i>Dibson Gondim, MD</i>	Striving For Laboratory Efficiency Nirvana: Accelerated Iterative Improvements to Scale Up COVID-19 Testing <i>Patrick Mathias, MD, PhD</i>	Detecting Anomalous Laboratory Results Using Manifold Approximation <i>Nicholas Spies, MD</i>
12:00 – 12:55	MENTORING ROUNDTABLE SESSION, Managed by T and E; Editorial Board Rooms: 306/307 <i>Mentor Facilitators: Ila Singh, Michelle Stoffel, Joe Sirintrapun, and Joe Rudolf</i>		
12:00 – 1:00	LUNCH - BALLROOM GALLERY		

Tuesday, May 10, 2022

Plenary Lectures | Afternoon Session

Room: Ballroom B

1:00 – 1:05	Opening Welcome to PI Summit 2022 - <i>J. Mark Tuthill and Ulysses G. J. Balis</i>
1:05 – 1:40	Cybersecurity Risk Mitigation - <i>Christy Wheaton</i>
1:40 – 2:15	Operational Effects of a Ransomware Attack on a Regional Health System - <i>John Spinosa, MD, PhD, FACP</i>
2:15 – 2:45	Security Panel Discussion - <i>Christine Wheaton, John Spinosa, David McClintock, Toby Cornish</i>
2:45 – 2:50	Technology Switch break
2:50 – 3:45	Multi-Scalar Data Integration Defines Tissue States and Disease Mechanism, a Cell at a Time - <i>Matthias Kretzler, MD</i>
3:45 – 4:15	Break/Browse Exhibits And Poster Sessions
4:15 – 4:45	Diamond Presentation - <i>Hamamatsu</i> Digital Pathology Validation of Diagnostic Fluorescence Microscopy in Anatomic Pathology - <i>Dylan Miller, MD, Intermountain Healthcare</i>
4:45 – 5:15	API Lifetime Achievement and Distinguished Service Awards Presentation - <i>Toby Cornish, MD, PhD, API President</i>
5:30 – 7:30	Opening Night Reception Location: DLCC Ballroom A (Exhibitor Ballroom)
7:15 – 9:00	Women in Pathology Informatics Networking Event Location: <i>Westin Pittsburgh - Washington Room</i>



Wednesday, May 11, 2022

Short Abstract Presentations | Running Concurrently | Morning Sessions

7:00 – 8:00 BREAKFAST - EXHIBITOR BALLROOM

8:00 – 9:00

Moderator:
Mark Tuthill
Rooms: 301/302

Moderator:
Ulysses Balis
Room: Ballroom B

Moderator:
David McClintock
Rooms: 303/304

Morning Track Lectures

	<p>Track 1: Digital Pathology Rooms: 301/302</p> <p>Moderator: <i>Lisa-Jean Clifford</i></p>	<p>Track 2: Informatics and Management Room: Ballroom B</p> <p>Moderator: <i>Jim Madory</i></p>	<p>Track 3: Becich-Friedman Distinguished Oral Presentations Rooms: 303/304</p> <p>Moderator: <i>Peter Gershkovich</i></p>
9:00 – 9:35	<p>Digital Pathology Implementation - A Pathologist's Perspective <i>Rajendra Singh, MD</i></p>	<p>What Does The Patient Expect? <i>Ed Klatt, MD</i></p>	<p>SNOMED CT for Cancer Synoptic Reporting: Advancements since 2019 <i>Walter Campbell, PhD, MBA</i></p>
9:35 – 9:45	Ten Minute Break to Switch Lectures		
9:45 – 10:20	<p>Development of Pathologist Training Materials using Consensus Driven Annotations of sTIL Assessment in Breast Cancer <i>Victor Garcia, MD</i></p>	<p>Direct Access Testing: Informatics Challenges and Opportunities <i>Michelle Stoffel, MD, PhD</i></p>	<p>Developing Quality Standards for the College of American Pathologists Electronic Cancer Protocols <i>Colleen Hebert, DHA</i></p>
10:20 – 11:20	Break, Browse Exhibits, and Poster Session		
11:20 – 12:00	<p>Approach to Clinical Validation for Clearing Histology with MultiPhoton Microscopy (CHiMP) <i>Richard Torres, MD</i></p>	<p>Academic-Industry Partnerships: Rules of Engagement <i>Liron Pantanowitz, MBCh</i></p>	<p>Cancer Registry Collection and De-identification of Whole Slide Images at Population Scale <i>James Mays, MD</i></p>
12:00 – 1:30	LUNCH – EXHIBITOR BALLROOM		
12:00 – 1:30	Travel Awardee Luncheon Rooms: 306/307		

Wednesday, May 11, 2022

Afternoon Track Lectures

	Track 1: Clinical Informatics and EHR Rooms: 301/302 Moderator: <i>David McClintock</i>	Track 2: Analytics and Informatics Room: Ballroom B Moderator: <i>Amrom Obstfeld</i>	Track 3: Digital Pathology and AI Rooms: 303/304 Moderator: <i>Toby Cornish</i>
1:30 – 2:05	Why Do People Ignore My Order Alert!?: Evaluation of Factors That Affect Compliance with Clinical Decision Support Tools <i>Ronald Jackups, MD, PhD</i>	Data Analysis and Data Visualization For Pathology Projects: Common Mistakes and How To Avoid Them <i>Yonah Ziemba, MD</i>	Strategies to Evaluate the Impact of Image Attributes on Algorithm Behavior <i>Mark Zarella, MD</i>
2:05 – 2:15	Ten Minute Break to Switch Lectures		
2:15 – 2:50	Incorporating Digital Pathology into an Integrated Electronic Health Record Workflow <i>John Ozolek, MD</i>	Scaling Up with R in Production <i>Stephan Kadauke, MD, PhD and Amrom Obstfeld, MD, PhD</i>	Digital Pathology Provides a Wealth of Data: What Are You Doing with it? <i>Lisa-Jean Clifford</i>
2:50 – 3:00	Ten Minute Break to Switch Lectures		
3:00 – 3:35	Exchanging Extended RBC Phenotyping and Genotyping Information: HL7 FHIR Implementation Guide Status <i>John Spinosa, MD, PhD, FACP</i>	Laboratory-Led Population Health Services: What Enables Laboratories to Successfully Support Value-based Care Initiative <i>Chris Garcia, MD</i>	*Becich-Friedman Distinguished Presentation Five Million Digital Slides Later: Workflow Lessons Learned <i>Orly Ardon, PhD, MBA</i>
3:35 – 4:30	Break, Browse Exhibits, and Poster Session		
4:30 – 5:00	Town Hall, Moderator: Bob McGonagle Room: Ballroom B		
5:00 – 5:45	API Block Room: Ballroom B		

NO DINNER IS PROVIDED FOR WEDNESDAY EVENING



Thursday, May 12, 2022

API Focus Session: Analytics, Machine Learning, and Artificial Intelligence in the Clinical Laboratories

Moderator: Dave McClintock | Rooms: 303/304

8:00 – 9:00	JPI Editorial Board Meeting – Rooms: 306/307
8:00 – 9:00	BREAKFAST – BALLROOM GALLERY
9:00 – 9:40	Informatics and Information Technology Tools for POCT Governance - <i>Edward Leung, PhD, DABCC, FACB/FAACC</i>
9:40 – 10:20	Lessons Learned in Auto-verification in the Core Clinical Laboratory - <i>Darci Block, PhD, DABCC</i>
10:20 – 10:30	STANDING BREAK
10:30 – 11:10	Basic Machine Learning to Improve and Personalize Laboratory Testing - <i>Sarah Wheeler, PhD</i>
11:10 – 11:50	Constructing Machine Learning Models That Can Be Transferred Across Clinical Practices - <i>Daniel Herman, MD, PhD</i>

The Becich-Friedman Distinguished Oral Presentation Awards

Orly Ardon, PhD, MBA | ardono@mskcc.org

Digital Pathology Diagnostics Scientific Manager, Memorial Sloan Kettering Cancer Center
Five Million Digital Slides Later: Workflow Lessons Learned

W. Scott Campbell, PhD, MBA | wcampbel@unmc.edu

Associate Professor, Department of Pathology/Microbiology, University of Nebraska Medical Center
SNOMED CT for Cancer Synoptic Reporting: Advancements since 2019

Colleen Hébert, DHA | chebert@cap.org

Clinical Quality Manager, Cancer Protocols and Data Standards, College of American Pathologists
Developing Quality Standards for the College of American Pathologists Electronic Cancer Protocols

Andrew Laitman, MD, PhD | laitman@uw.edu

Resident, Laboratory Medicine and Pathology, University of Washington
A Dynamically Generated Machine Learning Model to Identify Low Prevalence Sars-Cov-2 Samples for Pooled Pcr Testing

James A. Mays, MD | alex.mays@nih.gov

Fellow, National Cancer Institute
Cancer Registry Collection and De-identification of Whole Slide Images at Population Scale

Samuel McCash, MD | mccashs@mskcc.org

Medical Director of Laboratory Information Systems, Memorial Sloan Kettering Cancer Center
Automated Reporting of Critical Values Enabled by Development of a Web-based Application

Nicholas Spies, MD | nspies@wustl.edu

Resident, Clinical Pathology, Washington University School of Medicine in St. Louis
Detecting Anomalous Laboratory Results Using Manifold Approximation

2022 POSTER SCHEDULE

TUESDAY, MAY 10 POSTERS

10:20am – 11:20am and 3:45pm – 4:15pm

Jenny Weon	<i>Incorporation of an Easy-to-Read, English- and Spanish-Language Autopsy Guide into the Electronic Health Record</i>
Qinle Ba	<i>Generalizable Deep-Learning-Based Interactive Segmentation in Digital-Pathology Analysis</i>
Qinle Ba	<i>AI-Based Whole Slide Scoring of Nuclear Breast Cancer Markers Ki67, ER, and PR Matches Performance of Clinical Scoring</i>
Yonah Ziemba	<i>Optimal Urinalysis Reflex Testing: A Data-Driven Approach</i>
Bradley Wheeler	<i>ML Classification for POC Blood Gas Testing in Ventilated Patients Transported by Helicopter Emergency Medical Services</i>
David Beyer	<i>Machine Learning on a Budget: An AI Colon Polyp Model</i>
Kyungmin Ko	<i>A Machine Learning Approach for Designing Better Allergy Testing Panels</i>
Robert Bell	<i>Analyzing Diurnal Variation in Hematology Testing Using the MIMIC-IV Dataset</i>
Sarah Dudgeon	<i>Prediction of Medical Outcome Using EMR, Graphs, and Node Embeddings</i>
Jitin Makker	<i>Natural Language Processing for Extracting Banff Scores from Kidney Transplant Biopsy Reports</i>
Jitin Makker	<i>Generating Quality Reports for ER, PR, and Her2/Neu Detection Using Natural Language Processing</i>
Xi Zhang	<i>Clinical Utility of Closely Spaced SNP Haplotypes in Mixed Chimerism Detection in Post-Transplant Patients</i>

WEDNESDAY, MAY 11 POSTERS

10:20am – 11:20am and 3:35pm – 4:30pm

Alaaeddin Alrohaibani	<i>Using EPIC Beaker AP as an ACGME Compliance Assessment Tool: The OHSU Pathology Residency Experience</i>
Anil Parwani	<i>Image Analysis is Adversely Affected by Pre-Analytical Factors Such as Stained Tissue Slide and Paraffin Block Age</i>
Azita Sharif	<i>Patient-Centric Animated Universal Consent Application</i>
Clarissa Jordan	<i>Implementation of PARAFFIN, a Pathology Report Automated Feedback Tool for Improved Education</i>
Jitin Makker	<i>Leveraging Lab Information System for Improving Educational Experience for Trainees</i>
Nada Shaker	<i>Digital Pathology Quality Review Enhances Biobanking Workflows with the Cooperative Human Tissue Network</i>
Nada Shaker	<i>Utilizing Digital Pathology Software Tools to Augment Autopsy Workflows: The Ohio State University Experience</i>
Parsa Hodjat	<i>Predicting Disease Severity In COVID-19 Patients Using a Deep Learning Model</i>
Vahid Azimi	<i>A Scalable Approach for Identifying Health Disparities by Combining Laboratory, Geospatial, and Socioeconomic Data</i>
Waqas Mahmud	<i>An Electronic Auditing Tool for the Assessment of Blood Product Utilization</i>
Oluwatobi Ozoya	<i>AI Model Architecture Optimization for MHIST Colon Polyp Image Dataset</i>
Michelle Stram	<i>Digitalization of Forensic Photography Workflow: A Case Study in Improving Efficiency & Reducing Reliance on Paper Logs</i>
Tushar Patel	<i>Demographic Differences Among Clinical Informatics Fellows: Data from the 2021 AAMC Report on Residents</i>

2022 SHORT ORALS SCHEDULE

TUESDAY, MAY 10 ORALS

301/302	8:00	Aaron Green	<i>Connecting the Dots - An Agnostic Exchange Network for Linking Disparate Hospitals and Laboratories</i>
301/302	8:15	Azita Sharif	<i>Interface Epic Patients' comprehensive clinical history with DSI' Precision Medicine Biobanking Platform (BTM)</i>
301/302	8:30	Jenna Reece	<i>Transgender Laboratory Medicine: Informatics Challenges in Implementing Estimated Glomerular Filtration Rate (eGFR)</i>
301/302	8:45	Noah Hoffman	<i>Rapid deployment of community SARS-CoV-2 PCR testing: bridging the gaps using open source technologies</i>
303/304	8:00	Rajan Dewar	<i>Efficient Implementation Of Digital Pathology In Small & Mid Size Practices: Finding The Digital "Bang For The Buck"</i>
303/304	8:15	Daniel Gonzalez	<i>Quality Assurance Precision Analysis for Automated Scoring Algorithms</i>
303/304	8:30	Daniel Gonzalez	<i>Laboratory Implementation of a Commercially Available Automated Ki-67 Scoring Algorithm</i>
303/304	8:45	Nakul Shankar	<i>Biochemical Free Recurrence Stratification in Prostate Cancer Based on Cellular Topology and Nuclear Morphometry</i>
Ballroom B	8:00	Srikar Chamala	<i>Big Data Informatics Training for Pathology Practice and Research</i>
Ballroom B	8:15	Mikael Haeggstroem	<i>Adapting the Online Wiki Editing System to Pathology Publishing</i>
Ballroom B	8:30	Keluo Yao	<i>Application of Natural Language Processing for Pathology Diagnosis and International Classification of Diseases for Oncology (ICD-O)</i>
Ballroom B	8:45	Patricia Hernandez	<i>The Role of Electronic Alerts in Decreasing Unnecessary C. difficile testing</i>

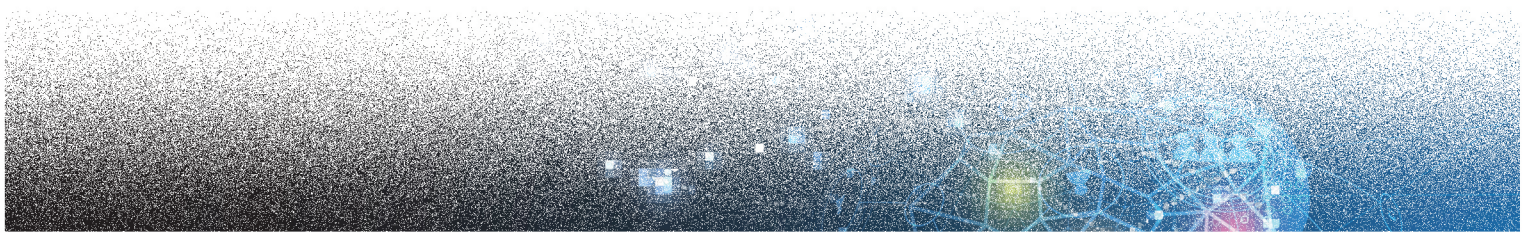
WEDNESDAY, MAY 11 ORALS

301/302	8:00	Bart Sturm	<i>Computer Aided Assessment of Melanocytic Lesions by Means of a Mitosis Algorithm</i>
301/302	8:15	Jeffrey Goldstein	<i>Weakly supervised estimation of placental gestational age and identification of maturation pathologies</i>
303/304	8:00	Chie Ohnishi	<i>Initial study to evaluate color and staining intensity for image based IHC evaluations</i>
303/304	8:15	Cody Bumgardner	<i>Self-service Platform for Continuous Collection, Processing, and Evaluation of Pathology Imaging</i>
303/304	8:30	Taryme Lopez-Diaz	<i>Digital Pathology Pipeline to Automate Large-Scale Photomontage Creation</i>
303/304	8:45	Masao Yoshida	<i>Histological Discrimination of Colorectal Tissue Structure Using Deep Neural Network</i>
Ballroom B	8:15	Joachim Silber	<i>Leveraging MSK's Data Fabric and Data Warehouse to Build Integrative Dashboards for the Pathology Research Biorepository</i>
Ballroom B	8:30	Nalan Yurtsever	<i>Semiautomated Classification of 5,294 Hematopathology Cases by WHO Diagnosis</i>
Ballroom B	8:45	Daniel Gonzalez	<i>Designing a Computer Assisted Workflow for AI-based Digital Pathology Applications</i>



**Pathology
Informatics
Summit 2022**

**FACULTY
PROFILES**



DIRECTOR



J. Mark Tuthill, MD

Division Head, Pathology Informatics, Henry Ford Health System

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J. Mark Tuthill, MD, completed his pathology residency and informatics fellowship training at the University of Vermont College of Medicine-Fletcher Allen Health Care, where he worked to create and direct that department's division of pathology informatics. Currently, Dr. Tuthill is head of the division of pathology informatics at Henry Ford Health System in Detroit, Michigan. Some areas of practice interest include digital imaging and image databases, development of Internet applications for laboratory information services, anatomic pathology and clinical laboratory information systems, laboratory outreach technology solutions, electronic health records and informatics training and education. Active in organized medicine throughout his training and professional career, at present, he is an advisor to the ASCP Annual Meeting Steering Committee, Wayne County District Director for the MSMS, and Conference Director for the annual Pathology Informatics Summit. As a charter member of the Association for Pathology Informatics, Dr. Tuthill has worked enthusiastically for the API from its inception. He has served as president, chairman of the membership committee, as an education committee member, and participated in the organization's original planning group.

CO-DIRECTOR



Ulysses J. Balis, MD, FCAP, FASCP, FAIMBE

Professor of Pathology; Director, Division of Pathology Informatics; Director, Computational Pathology Laboratory Section; Director, Pathology Informatics Fellowship Program;

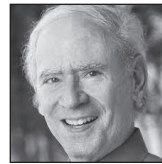
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Dr. Balis (PI2022 Course Co-Director) is Professor of Pathology, Associate Chief Medical Information Officer, and Director of the Division of Pathology Informatics at the University of Michigan. As an elected Fellow of the American Institute for Medical and Biological Engineering (AIMBE), he has maintained longstanding interest in the intersection of engineering, high-performance computation, and the practice of medicine. The U-M Pathology Informatics Division is noteworthy for being one of the few such academic information technology groups operating in support of pathology, while also being wholly housed within its host pathology department, and not a central IT division. Dr. Balis has active NIH-supported research initiatives in several areas of pathology and medical informatics, including the NIH-NIDDK Kidney Precision Medicine Project (KPMP)

and an NIDDK RC2-based Development of 21st Century Concepts in Urology grant, with these projects allowing for the application of many informatics concepts to contemporary challenges in Pathology, including machine learning, image-based analytics, and machine vision tools for histopathology. He also serves as director of the U-M Pathology Informatics Fellowship – one of only ten such two-year programs in the U.S. Similarly, he has maintained a longstanding interest in pathology informatics education, with him currently serving as one of the founding members of the Clinical Informatics Subspecialty Boards Exam Committee. Dr. Balis is the author of over 150 publications, many image-based algorithms, multiple patents, numerous book chapters and is co-editor of one of the contemporary reference textbooks on the topic of Pathology Informatics (along with Drs. Mark Tuthill and Liron Pantanowitz). He has delivered over 300 invited presentations, nationally and internationally, on various topics related to pathology informatics, data analytics, and image analysis.

PLANNING COMMITTEE



Bruce A. Friedman, MD

Emeritus Professor of Pathology, University of Michigan Medical School; President, Pathology Education Consortium

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Bruce Friedman is a graduate of the University of Michigan Medical School. He completed a pathology residency in the Department of Pathology, University of Michigan Medical School, in 1971. In 1973, he joined the pathology faculty of the University of Michigan. He served on the faculty of the University of Michigan for 33 years, retiring in 2006.

He served as the Director of Pathology Informatics in the Department of Pathology and also as Director of Clinical Support Systems for the University of Michigan Health System. He was a founder of the first pathology informatics conference in the country called AIMCL which was offered for 21 years in Ann Arbor beginning in 1983. In 2004, this conference was renamed Lab Infotech Summit and moved to Las Vegas for six years. This conference was merged with APiII in 2010 to form the Pathology Informatics Summit.

He is the founder of a blog named Lab Soft News that focuses on clinical lab software and the clinical lab industry. He was a founding member, and one of the two founding presidents, of the Association for Pathology Informatics (API). He served as the co-director of the Pathology Informatics Summit planning committee from 2010 to 2014. He continues to serve on the planning committee.

FACULTY



Darci Block, PhD, DABCC

Assistant Professor in the Laboratory Medicine and Pathology, Mayo Clinic

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Dr. Darci Block is an Assistant Professor in the Laboratory Medicine and Pathology College of Medicine at the Mayo Clinic Rochester. She serves as Co-Medical Director for the Central Clinical Laboratory and Central Processing as well as Vice Chair of Informatics in the Department of Laboratory Medicine and Pathology.



Victor Brodsky, MD

Associate Professor of Pathology and Immunology; Division of Anatomic and Molecular Pathology (AMP); Washington University School of Medicine St. Louis

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Victor Brodsky, MD is the Associate Professor and Associate Medical Director of Information Systems in the department of Pathology and Immunology of Washington University School of Medicine in St. Louis. Previously, Dr. Brodsky has served as the Medical Director of Information Systems at Cedars-Sinai Medical Center in Los Angeles. Prior to that, Dr. Brodsky worked as the Medical Director of Informatics and Assistant Professor of Pathology and Laboratory Medicine, as well as the Assistant Professor of Public Health at Weill Cornell Medical College in New York City. Before that, Dr. Brodsky was the first pathology informatics fellow in Massachusetts General Hospital in Boston after completing his Anatomic Pathology residency at Mt. Sinai Medical Center in New York City following his graduation from the combined seven-year BA/MD program at Boston University in 2005. Dr. Brodsky has served as the co-chair of the Education Committee of the Association for Pathology Informatics (API) and was the co-Chair of Health Level 7 (HL7) Anatomic Pathology Working Group while acting as a liaison to HL7 from the College of American Pathologists (CAP) for over 7 years. He has been involved in the creation of the upcoming AUTO14 laboratory barcoding standard by the Clinical and Laboratory Standards Institute (CLSI) and has also served on the Office of the National Coordinator for Health Information Technology (ONC) Laboratory Reporting Workgroup, advising the US government's Meaningful Use program. Dr. Brodsky is among the authors of the Pathology Informatics Essentials for Residents (PIER) curriculum (<https://apc.memberclicks.net/m-pier>) and is the architect of the open source "Order" laboratory management web platform (<https://github.com/victorbrodsky/order-lab>), which includes the pathology resident call log book, translational research management, dashboards, and other software systems.



Alexis B. Carter, MD

Physician Informaticist, Department of Pathology and Laboratory Medicine, Children's Healthcare of Atlanta

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Alexis Carter, MD, is a Physician Informaticist for the Laboratory at Children's Healthcare of Atlanta and an Adjunct Associate Professor within the Department of Pathology and Laboratory Medicine at Emory University. Dr. Carter is teaching faculty for the Clinical Informatics Board Review Course for physicians presented by the American Medical Informatics Association (AMIA). She is the current Secretary/Treasurer for the Association of Molecular Pathology (AMP) as well as the chair of the AMP Electronic Health Records and Genomics Working Group. She is the current Secretary for the Clinical and Laboratory Standards Institute document development committee for two-dimensional barcoding for both clinical and anatomic pathology laboratory specimens. She was the senior author for the guideline on validation of next-generation sequencing bioinformatics pipelines from AMP, the College of American Pathologists (CAP), and AMIA. Dr. Carter is the Vice-Chair of the CAP Informatics Committee and helped develop the original validation guideline for Whole Slide Imaging. She is a former chair of the International Pathology and Laboratory Medicine Special Interest Group for SNOMED-CT International, a former president of the Association of Pathology Informatics and was the inaugural and re-elected chair of the Informatics Subdivision of AMP. She is an Associate Editor of the Journal of Molecular Diagnostics, an Associate Editor for Administrative and Regulatory Affairs for Archives of Pathology and Laboratory Medicine, an editorial board member of the Journal of Pathology Informatics, and a reviewer for multiple scientific journals in molecular diagnostics, genetics and informatics. She is board certified in clinical informatics, molecular genetic pathology, anatomic pathology and clinical pathology.



Lisa-Jean Clifford

COO and Chief Strategy Officer, Gestalt Diagnostics

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Ms. Clifford is currently the COO & Chief Strategy Officer of Gestalt Diagnostics and has over twenty years of experience in healthcare and laboratory technology with fifteen years of experience in digital pathology. Her roles include over eleven years as the CEO of an LIS company, with other senior level roles in product and organizational strategy, corporate operations, marketing, business development, digital pathology and product management. She has worked at leading healthcare solution vendors including McKesson and IDX (GE Healthcare) and has held executive level positions as Vice President of Global Marketing at International Data Group (IDG) and Operations at eBusiness Technologies. Ms. Clifford is widely published in business and industry trade publications; has authored a book on XML; and frequently presents educational and thought leadership sessions at healthcare industry conferences focused on technology.



Toby C. Cornish, MD, PhD

Medical Director of Informatics, Associate Professor, University of Colorado School of Medicine

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Dr. Cornish is an Associate Professor of Pathology at The University of Colorado School of Medicine where he practices gastrointestinal pathology and clinical informatics. He serves as the Vice-Chair for Pathology Informatics and Medical Director of Informatics for the CU Department of Pathology, and as the Medical Director of the Laboratory Information Systems for UHealth. In addition to applied clinical informatics, his interests include histologic image analysis, digital pathology, and artificial intelligence / machine learning. Dr. Cornish is a member of the HIMSS-SIIM Enterprise Imaging Community’s Interactive Multimedia Reporting Workgroup, the HIMSS-SIIM Enterprise Imaging Community Advisory Council Member, the Digital Pathology Association Artificial Intelligence / Machine Learning (AI/ML) Committee, the College of American Pathologists Artificial Intelligence Committee and is President of the Association of Pathology Informatics. He was named to The Pathologist magazine’s Power List 2020 for Big Breakthroughs, serves on the Editorial Board for Modern Pathology and is the Associate Editor for Informatics of the American Journal of Clinical Pathology.



Jeffrey Fine, MD

Associate Professor, Faculty Clinician, University of Pittsburgh (Magee-Womens Hospital)

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Dr. Fine is a member of the Division of Breast and Gynecologic Pathology. He is also the Director, Subdivision of Advanced Imaging and Image Analysis (Pathology Informatics).



Chris Garcia, MD

Medical Director of Clinical Informatics, Medical College of Wisconsin

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Chris Garcia, MD is the Medical Director of Clinical Informatics at Labcorp and is board certified in Anatomic and Clinical Pathology. Dr. Garcia completed a fellowship in Pathology Informatics at Massachusetts General Hospital and has developed expertise in digital pathology, computational pathology, and laboratory analytics. He works closely with Labcorp’s hospitals and health systems customer solutions team in developing and supporting laboratory analytics products.



Victor Garcia, MD

ORISE Fellow, United States Food and Drug Administration

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My name is Victor Garcia, a current Oak Ridge Institute for Science and Education (ORISE) Fellow at the U.S. Food and Drug Administration, board-certified in Internal Medicine, and a board-eligible Clinical Informatician. Currently, I am a member of the High Throughput Truthing (HTT) project led by Brandon D. Gallas, PhD, at the FDA, which aims to develop a dataset of triple negative breast cancer slides for the assessment of stromal tumor infiltrating lymphocytes (<https://ncihub.org/groups/eedapstudies/overview>). My prior work has involved natural language processing in radiology reports (<https://cic2020.zerista.com/event/member/682763>) and analysis of electronic health record data.



Dibson Gondim, MD

Assistant Professor, University of Louisville

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Dr. Gondim is Director of Pathology Informatics, Assistant Professor of Pathology & Laboratory Medicine, Associate Residency Program Director of Anatomic Pathology, and Director of Genitourinary Pathology at University of Louisville School of Medicine. He also serves Medical Director of UL Health Jewish Hospital Histology Laboratory. After completing his medical education at Universidade Federal do Rio Grande do Norte in Brazil, he went on to do residency training in anatomic pathology and two fellowships (neuropathology and genitourinary pathology) at Indiana University School of Medicine, Indianapolis, IN, followed by GI and liver pathology fellowship training at Saint Louis University in Saint Louis, MO. He is board certified in both anatomic pathology and neuropathology. Dr. Gondim’s areas of specialization are genitourinary pathology, liver and gastrointestinal pathology, and neuropathology. His research interests are varied but focus on genitourinary pathology, neuropathology, liver and GI pathology, and pathology informatics. He is a member of several professional organizations including American Association of Neuropathologists, United States and Canadian Academy of Pathology, College of American Pathologists, Indiana Association of Pathologists, and Association for Pathology Informatics. Dr. Gondim has 12 peer-reviewed publications and is the winner of the 2019 Surgical Pathology Award for a poster that demonstrated, for the first time, an artificial intelligence model that can correctly classify the majority of the most common types of kidney neoplasms, presented at the 108th Annual Meeting of the United States and Canadian Academy of Pathology.

Phil received his MD and PhD from the University of Alabama in Birmingham and completed his pathology residency at Brigham and Women’s Hospital and Harvard Medical School. Prior to joining Sonic, he was Professor, Vice Chair, Chief of Clinical Pathology and Director of Informatics at the University of Miami and Jackson Health Systems. He also founded Cognoscenti Health Institute

in 2002, a laboratory company in Florida which was acquired by Sonic.



Peter Gershkovich, MD

Director, Section of Pathology Informatics and Cancer Data Science, Associate Professor, Yale University School of Medicine

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Dr. Peter Gershkovich received his medical degree from the Altay State Medical Institute, Barnaul, Russia. After graduation, he remained in his alma mater, getting a prestigious position as an assistant professor the Department of Physiology where he developed strong interest in information technology and its practical applications for the computerized assessment of cardiac and respiratory function. After immigrating to the US at the end of 1993 and receiving master's degree in Health Administration from Suffolk University, Boston he worked as a professional programmer in the field of medicine for several years. In 2000 he was accepted into the Medical Informatics Fellowship at Yale Center for Medical Informatics where he continued learning software development focusing on genomic data analysis, automation of clinical guidelines, and information visualization. Shortly after finishing the fellowship program, Dr. Gershkovich joined the Informatics team at Yale School of Medicine Pathology Department. He is currently Associate Professor of Pathology and the Director of Pathology Informatics at Yale School of Medicine. Dr. Gershkovich has more than twenty years of experience in medical software development. Combining his knowledge of medicine and programming over the past fourteen years with Yale School of Medicine Pathology Department, Dr. Gershkovich has been studying methods of agile software development to rapidly close the functionality gaps that exist between emerging technologies and commercial Laboratory Information Systems (LIS). He developed a range of cutting-edge software applications that bridged research and clinical operations. Dr. Gershkovich remains interested in clinical information visualization, DNA sequencing analysis, NLP, and full-text search of clinical data.



Metin Gurcan, PhD

Director, Center for Biomedical Informatics; Professor, Department of Internal Medicine, Biomedical Engineering, Pathology, Wake Forest School of Medicine

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Dr. Metin Gurcan is the founding Director of the Center for Biomedical Informatics and Professor of Internal Medicine, Pathology, and Biomedical Engineering at Wake Forest School of Medicine and Director of the Clinical Image Analysis Lab (<http://tsi.wakehealth.edu/CIALab/>). Previously, he was Professor of Biomedical Informatics and Pathology, Director of Division of Clinical and Translational Informatics at The Ohio State University. Dr. Gurcan is an internationally recognized researcher and educator in the fields of medical image analysis, artificial intelligence, and

biomedical informatics. His research has been supported by NIH NCATS, NCI, NIDCD, NHLBI, NBIB, NIAID, DOD, as well as awards from several nonprofit organizations. He is the author of over 200 peer-reviewed publications, book chapters and was awarded six patents for his inventions in medical image analysis. Dr. Gurcan received his BSc. and Ph.D. degrees in Electrical and Electronics Engineering from Bilkent University, Turkey, and his MSc. Degree in Digital Systems Engineering from the University of Manchester Institute of Science and Technology, England.

Dr. Gurcan is the recipient of several awards, including the British Foreign and Commonwealth Organization Award, NCI caBIG Embodying the Vision Award, NIH Exceptional, Unconventional Research Enabling Knowledge Acceleration (EUREKA) Award, Children's Neuroblastoma Cancer Foundation Young Investigator Award, The OSU Cancer Center REAP Award, and Pelotonia Idea Award. He is a Fellow of SPIE and a senior member of IEEE and AMIA. He currently serves on the editorial boards of the Journal of Pathology Informatics and Journal of Medical Imaging; organizes the Pathology Informatics Histopathological Image Analysis (HIMA) workshop; and co-chaired the SPIE Medical Imaging Symposium between 2019-2022.



Shannon Haymond, MD

Vice Chair, Computational Pathology; Director, Mass Spectrometry; Associate Professor of Pathology (Pediatric Pathology), Northwestern University Feinberg School of Medicine

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Dr. Shannon Haymond is the Vice Chair for Computational Pathology and Director for Clinical Mass Spectrometry at Ann & Robert H. Lurie Children's Hospital of Chicago. She is Associate Professor of Pathology at Northwestern University Feinberg School of Medicine. Dr. Haymond's computational pathology efforts are aimed at building the capacity for advanced data analytics in her department through innovations in infrastructure, education, and research to facilitate data-informed decision making for clinical care, operations, and quality assurance. She recently completed a Master of Science in Predictive Analytics from Northwestern University.



Daniel Herman, MD, PhD

Assistant Professor, University of Pennsylvania

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Daniel Herman received MD and PhD degrees from Harvard University and trained in Clinical Pathology at the University of Washington. He is now an Assistant Professor at the University of Pennsylvania, where he directs the Endocrinology laboratory and has a research group working on using EHR data to improve screening for underdiagnosed diseases like primary aldosteronism.



Ronald Jackups, MD

Associate Professor, Washington University School of Medicine, St. Louis, MO

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Ronald Jackups, MD, PhD is the program director for the Clinical Informatics fellowship at Washington University School of Medicine and the chief medical information officer for laboratories at BJC Healthcare in St. Louis, MO. His clinical and research interests include the use of clinical decision support to improve the utilization of laboratory testing and blood transfusion in healthcare systems.



Stephan Kadauke, MD, PhD

Assistant Professor of Clinical Pathology and Laboratory Medicine, Perelman School of Medicine, University of Pennsylvania, Children's Hospital of Philadelphia

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Stephan Kadauke has both an MD and a Ph.D. in Cell and Molecular Biology from the University of Pennsylvania, and trained in Clinical Pathology and Transfusion Medicine at Harvard Medical School. He works at the Children's Hospital of Philadelphia, where he co-directs the Cell and Gene Therapy Lab, a cGMP laboratory that processes things such as bone marrow or CAR-T cells for transplant or infusion in pediatric patients. During his clinical training, Stephan got fed up with the fact that there was no formal or practical introduction to data analysis for clinicians, so he spent the better part of a year to develop a curriculum in Reproducible Clinical Data Analysis that's tailored for medical students, physicians, nurses, and other health care professionals who deal with data. He currently teaches his course at the Perelman School of Medicine at the University of Pennsylvania.



Edward Klatt, MD

Professor, Mercer University School of Medicine

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Dr. Klatt is Professor of Pathology at Mercer University School of Medicine. He has been involved in aspects of health care delivery for over 59 years and involved with health science education for over 48 years. He maintains one of the oldest World Wide Web internet sites, WebPath, in pathology education going on 27 years. He is the author for 4 of the 7 reference works in the Robbins & Cotran series of pathology texts used worldwide for pathology education in the health sciences. He is currently involved in curriculum design, development, and deployment, including computer-aided methodologies, for undergraduate medical education. He sponsors informatics educational projects for students. He facilitated development of Mercer's new Patient Based Curriculum with a

wellness program as well as emphasis on integration of clinical and basic science content in an active learning environment with information management and critical thinking through a team-based approach for students to develop skills in delivery of quality health care. Dr. Klatt has been involved with the PathInfo Summit and its precursors for the past 27 years.



Beatrice Knudsen, MD, PhD

Professor of Pathology, Medical Director of Computational Pathology, University of Utah

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Beatrice Knudsen, MD, PhD, embraces multidisciplinary research and has contributed her knowledge of pathology and oncogenic kinases to collaborative projects with the most talented basic scientists, epidemiologists and biostatisticians at Cedars-Sinai, and previously at the Fred Hutchinson Cancer Research Center. She is the director of the Cedars-Sinai Division of Translational Pathology. Knudsen oversaw the creation of state-of-the-art Cedars-Sinai Biobank and molecular pathology core. The new biobank is a roughly 7,000-square-foot facility on the first floor of the Steven Spielberg Building. The facility can fulfill Cedars-Sinai's dual missions of serving science and the community.



Matthias Kretzler, MD

Warner-Lambert/Parke-Davis Professor, Internal Medicine-Nephrology; Professor, Computational Medicine & Bioinformatics, University of Michigan

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Matthias Kretzler is the Warner-Lambert/Parke-Davis Professor of Internal Medicine/Nephrology and Computational Bioinformatics at the University of Michigan. The overarching goal of his research is to define glomerular diseases in mechanistic terms and use this knowledge for targeted therapeutic interventions. To reach this goal his international research team at the University of Michigan has developed a translational research pipeline centered on integrated systems biology analysis of renal disease. Over the last 25 years the team has built experience in interdisciplinary data integration of large-scale data sets in international multi-disciplinary research networks and public private partnerships across diseases and continents. The networks Dr.Kretzler helps to coordinate (NEPTUNE, KPMP, CPROBE and RPC2) link carefully monitored environmental exposures, genetic predispositions, transcriptional networks, proteomic profiles, metabolic fingerprints, digital histological biopsy archive and prospective clinical disease characterization to define cross-cutting disease mechanisms. The molecular mechanism identified have result in more than 350 publications, but most importantly in new disease predictors, de novo drug development and successful clinical trials of novel therapeutic modalities for glomerular diseases, for details see MiKTMC.org.



Edward Leung, PhD, DABCC, FACB/FAACC

Assistant Professor, Clinical Pathology, Keck School of Medicine, University of Southern California; Director, Core Laboratory, Children's Hospital Los Angeles

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Dr. Edward Leung is an Assistant Professor of Clinical Pathology at the Keck School of Medicine of the University of Southern California and the Director of the Core Laboratory in the Department of Pathology & Laboratory Medicine at Children's Hospital Los Angeles. As Director of the Core Laboratory, he oversees the following areas: Clinical Chemistry, Biochemical Genetics and Special Chemistry, Laboratory Support Services, and Point of Care Testing.



Bruce Levy, MD, CPE

Professor at Geisinger Commonwealth School of Medicine (GCSOM); Program Director of the CI Fellowship, Associate CMIO, Geisinger Health System

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Bruce Levy, MD, CPE, is responsible for the development of informatics education throughout the medical school and clinical enterprise. Dr. Levy received his Doctor of Medicine degree from New York Medical College, and is board certified in anatomic and clinical pathology, forensic pathology, and clinical informatics. He is also a Certified Physician Executive and a Fellow of the American Association for Physician Leadership. Prior to coming to Geisinger, Dr. Levy was an Associate Professor of Pathology and Biomedical Informatics, and Associate Chief Health Informatics Officer at the University of Illinois at Chicago. Clinical informatics is not merely a subspecialty of medicine, but is an integral part of the practice of medicine in the 21st Century. Therefore, it is important that every physician, nurse, pharmacist and other allied health professionals have a working knowledge of informatics as part of their education and training. Dr. Levy is leading Geisinger's efforts to introduce informatics education into undergraduate medical education, all medical residencies and fellowships, and a graduate program in Precision Medicine. He is Program Director for Geisinger's ACGME-accredited clinical informatics fellowship, one of the first accredited programs in the United States. Dr. Levy's areas of research interest include the visualization, analysis and sharing of complex health data, and the use of novel educational tools within medical education. The Scalable Adaptive Graphics Environment (SAGE) is a tool designed to enable groups to collaborate in solving problems that require juxtaposition of large volumes of information in ultra-high resolution both locally and simultaneously at multiple remote sites. Dr. Levy developed tools that enabled SAGE to display and collaborate large volume medical data, such as whole-slide images and genomic information. He has also worked to

develop unique educational tools to enable multiple programs to work and learn together. One example is the CI fellowship virtual case conference and retreat series. He is currently working on the development of an educational Electronic Health Record (eEHR) to facilitate informatics education for medical students and residents.



Faisal Mahmood, PhD

Assistant Professor, Harvard Medical School

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Dr. Mahmood is an Assistant Professor of Pathology at Harvard Medical School and the Division of Computational Pathology at the Brigham and Women's Hospital. He received his Ph.D. in Biomedical Imaging from the Okinawa Institute of Science and Technology, Japan and was a postdoctoral fellow at the department of biomedical engineering at Johns Hopkins University. His research interests include pathology image analysis, morphological feature, and biomarker discovery using data fusion and multimodal analysis. Dr. Mahmood is a full member of the Dana-Farber Cancer Institute / Harvard Cancer Center ; an Associate Member of the Broad Institute of Harvard and MIT, and a member of the Harvard Bioinformatics and Integrative Genomics (BIG) faculty.



Patrick Mathias, MD, PhD

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Patrick Mathias, MD, PhD, is an Assistant Professor who serves as the Vice Chair of Clinical Operations and the Associate Medical Director of the Informatics division in the Department of Laboratory Medicine and Pathology at the University of Washington School of Medicine. He is also the Medical Director of Point of Care Testing for Airlift Northwest (flight transport service covering Washington and Alaska). He is board certified in Clinical Pathology and Clinical Informatics. Prior to postgraduate medical training, he earned his undergraduate degree in electrical engineering from Duke University and completed his M.D. and Ph.D. in bioengineering from the University of Illinois with a research focus on nanophotonics and biosensors. Dr. Mathias's informatics responsibilities cover improving electronic health record systems to improve the ordering and interpretation of laboratory tests and developing infrastructure to support advanced analytical technologies in the clinical laboratory. In addition, he supervises departmental analytics efforts to improve laboratory operations and assess the lab's impact on clinical care. His research interests include assessing the cost effectiveness of testing and informatics interventions at a population level. He is also a strong believer in establishing data science as a core skill in medicine and teaches programming and data analysis skills to the laboratory medicine and pathology community.



David McClintock, MD

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Dr. David McClintock is a Senior Associate Consultant in the Division of Computational Pathology and Artificial Intelligence, Department of Laboratory Medicine and Pathology, at the Mayo Clinic (Rochester). Current professional interests include the use of machine learning and artificial intelligence tools to improve patient care, clinical laboratory workflows, operational efficiency, and scientific discovery. He is currently the interim Program Committee Chair-Elect within the Association for Pathology Informatics.

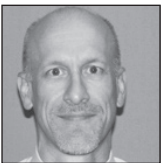


Amrom Obstfeld MD, PhD

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Amrom Obstfeld MD, PhD, is the Associate Chair of Pathology Informatics as well as the Hematology Laboratory at Children's Hospital of Philadelphia. After receiving his MD and PhD degrees from the College of Physicians and Surgeons at Columbia University, he went on to train in Clinical Pathology at the Hospital of the University of Pennsylvania. In addition to his duties within the Hematology Laboratory, Dr. Obstfeld's clinical responsibilities include leading the development of analytic tools to aid in laboratory quality management, administration, and operation, and interfacing with other groups throughout the hospital on informatics initiatives. His research focuses on utilizing clinical and pre-clinical laboratory data sets for predicting diagnosis and prognosis using statistical and machine learning techniques. Dr. Obstfeld plays a major role in designing and implementing educational experiences for pathology trainees and faculty at the University of Pennsylvania within the areas of clinical and pathology informatics.



John Ozolek, MD

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Dr. John Ozolek is a Professor in the Department of Pathology, Anatomy & Laboratory Medicine (PALM) at the West Virginia University School of Medicine located in Morgantown, WV. He obtained his M.D. degree at the University of Pittsburgh. He received his pathology training at the University of Pittsburgh Medical Center and completed a Pediatric Pathology fellowship at Children's Hospital of Pittsburgh. Dr. Ozolek has long had interests in digital pathology and artificial intelligence, and he currently leads the Digital Pathology program at WVU Medicine.



Liron Pantanowitz, MBBCh

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Dr. Pantanowitz earned his medical degree at the University of the Witwatersrand in South Africa. He completed his residency in anatomic and clinical pathology at Beth Israel Deaconess Medical Center, Harvard Medical School, in Boston followed by fellowships in hematopathology and cytopathology. He is also boarded in Clinical Informatics. During his career at Tufts University School of Medicine, Baystate Medical Center, and the University of Pittsburgh Medical Center he has achieved regional, national and international recognition as a leader in the pathology field. As a leader in informatics with a particular interest in digital pathology he spearheaded landmark clinical guidelines for promoting adoption of digital pathology and developing a national pathology informatics curriculum. Dr. Pantanowitz is an Editor-in-Chief of the Journal of Pathology Informatics. He is widely published in the field of pathology informatics including digital imaging and its application to pathology. He is the recipient of numerous awards, including a Distinguished Service Award from the Association for Pathology Informatics. Throughout his career he has linked his skills as a diagnostic pathologist to a lifetime commitment to educating others.



Anil Parwani, MD, PhD, MBA

Professor of Pathology; Vice-Chair and Director of Anatomic Pathology, The Ohio State University; Editor-in-chief of Diagnostic Pathology; Editor of the Journal of Pathology Informatics

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Dr. Anil Parwani is a Professor of Pathology at The Ohio State University. He serves as the Vice Chair and Director of Anatomical Pathology. Dr. Parwani is also the Director of Pathology Informatics and Director of the Digital Pathology Shared Resource at The James Cancer Hospital. His research is focused on diagnostic and prognostic markers in bladder and prostate cancer, and molecular classification of renal cell carcinoma. Dr. Parwani has expertise in the area of surgical pathology, viral vaccines and immunology, and pathology informatics including designing quality assurance tools, bio banking informatics, clinical and research data integration, applications of whole slide imaging, digital imaging, telepathology, image analysis and lab automation. Dr. Parwani has authored over 300 peer-reviewed articles in major scientific journals and several books and book chapters. Dr. Parwani is the Editor-in-chief of Diagnostic Pathology and one of the Editors of the Journal of Pathology Informatics.



Joseph Rudolf, MD

Assistant Professor, Department of Pathology, University of Utah School of Medicine; Medical Director, Automated Core Laboratory, ARUP Laboratories

Dr. Rudolf is an assistant professor in the Department of Pathology at the University of Utah. He serves as Medical Director for Clinical Informatics and the Automated Core Laboratory at ARUP Laboratories, a national nonprofit and academic reference laboratory in Salt Lake City, Utah.

His clinical and research interests focus on the intersection of informatics and clinical operations including automation, clinical decision support, utilization management, and reporting and analytics. He is also passionate about clinical process improvement and initiatives to support quality and safety.

Dr. Rudolf earned his medical degree (2012) from the University of Washington School of Medicine in Seattle, Washington. He completed his residency training in Clinical Pathology (2015) and fellowship in Clinical Informatics (2017) at the Massachusetts General Hospital in Boston, Massachusetts.



Joel Saltz, MD, PhD

Cherith Professor and Founding Chair, Department of Biomedical Informatics; Vice Chair for Laboratory Initiatives and Digital Medicine in the Department of Pathology; Vice President for Clinical Informatics, Stony Brook Medicine; Associate Director, Stony Brook Cancer Center, Department of Biomedical Informatics

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Joel Saltz is Chair and Professor of Biomedical Informatics at Stony Brook, holds the Cherith Chair in Biomedical Informatics and is Director of the Institute for Engineering Driven Medicine and Associate Director for Informatics of the Stony Brook Cancer Center. He received an MD-PhD from Duke University in Computer Science, is boarded in Clinical Pathology with residency training at Johns Hopkins. He is a pioneer in the area of Digital Pathology having developed the first whole slide imaging platform in the 1990's and has gone on to develop highly innovative deep learning/machine learning algorithms along with a variety of innovative Digital Pathology tools and platforms.



Pinaki Sarder, PhD

Associate Professor, Pathology & Anatomical Sciences and Biomedical Engineering, University at Buffalo - The State University of New York

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Pinaki Sarder is currently an assistant professor of pathology and anatomical sciences at University at Buffalo, with adjunct

appointments in biomedical engineering and biostatistics. Earlier he was a post-doctoral research associate at Mallinckrodt Institute of Radiology at Washington University School of Medicine in St. Louis. He received the B.Tech. degree in electrical engineering from the Indian Institute of Technology, Kanpur, in 2003, and the M.Sc. and Ph.D. degrees in electrical engineering from Washington University in St. Louis, in 2010. Dr. Sarder serves in the editorial board of the Journal of the American Society of Nephrology (JASN), and is a senior member of IEEE. He is a recipient of University at Buffalo's Exceptional Scholars – Young Investigator Award in 2018. His current research interests include computational image analysis and digital pathology with applications to renal pathology informatics. He has published >50 peer reviewed articles in journals and conference proceedings. His notable works as the senior author include a human-artificial-intelligence-loop approach for segmenting pathological structures from whole slide thin tissue images (Lutnick et al., Nature Machine Intelligence, 2019) and an automated computational version of tervaert classification scheme for classifying renal biopsy cases of diabetic nephropathy (Ginley et al., JASN, 2019). The work in JASN was selected for the Best of American Society of Nephrology (ASN) Journals: Clinical Journal of ASN (CJASN) and JASN in 2018-19.



Jansen Seheult, MB BCh BAO, MSc, MS, MD

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Jansen N Seheult, MB BCh BAO, MSc, MS, MD is a Senior Associate Consultant in the Division of Hematopathology, Department of Laboratory Medicine and Pathology at Mayo Clinic, Rochester in the United States. He completed his residency training in clinical pathology and fellowship training in Blood Banking/ Transfusion Medicine at the University of Pittsburgh Medical Center (UPMC) in Pittsburgh, PA as well as fellowship training in Special Coagulation at the Mayo Clinic, Rochester, MN. Dr. Seheult has extensive experience in data analytics, simulation techniques and machine learning. His doctoral research at the Royal College of Surgeons in Ireland focused on development of a novel technology for acoustic signal processing of time-stamped inhaler events for the prediction of drug delivery from a dry powder inhaler. Dr. Seheult's artificial intelligence (AI) interests include natural language processing for automated text report generation for pathology reports, segmentation and object detection algorithms for benign and malignant hematopathology, and neural networks for automated flow cytometry analysis and gating.



Devereaux E. Sellers II, MD

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Devereaux Sellers, MD, MBA, is currently a Clinical Informatics fellow and staff autopsy pathologist at MetroHealth Medical Center in Cleveland, Ohio. He completed his AP/CP

Pathology residency at MetroHealth in 2021. He received his MBA in Healthcare Administration from Davenport University in Grand Rapids, Michigan in 2017. Prior to pursuing a career in medicine, he was a computer programmer and analyst for state government. His areas of interest include whole slide imaging, resident education, laboratory test utilization, and workflow analysis.



John Sinard, MD, PhD

Professor, Pathology and Ophthalmology and Visual Science; Vice Chair for Clinical Operations, Pathology; Director, Anatomic Pathology, Pathology; CLIA Laboratory Director, Pathology; Medical Director, Pathology Informatics, Yale School of Medicine

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John Sinard received his MD and PhD degrees from Johns Hopkins Medical School and then did an AP residency at the Yale-New Haven medical center. He joined the faculty at Yale after residency and has been there ever since, rising to the rank of Professor. During his time at Yale, Dr. Sinard directed the autopsy service for 16 years, build the Pathology Informatics Program, was the residency program director for 6 years, and the director of Anatomic Pathology for 7 years. He is currently Vice Chair for Clinical Operations, the CLIA laboratory director, and Medical Director of Pathology Informatics.



Rajendra Singh, MD

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Dr. Singh is the Director of Dermatopathology for Summit Health. He is also the co-founder of PathPresenter, an online digital platform that has 425,000+ users in 190+ countries and is used by multiple academic departments, private pathology groups and organizations in the US and all over the world. (<https://pathpresenter.net>) He has served as the Chair of the American Society of Dermatopathology Informatics Committee. He currently serves on the Sulzberger Grant Committee of the AAD and on the Editorial Board of JAAD. In 2013, he was awarded the Sulzberger Grant from the American Academy of Dermatology for developing interactive tools for teaching of dermatology and dermatopathology. He is the Editor, creator and developer of the app, mydermpath+ and educational platforms-wiydx.com. He also serves as a member of the Digital and Computational Pathology Committee of the CAP, Editorial Board of the WHO for Classification of tumors, 5th Edition and the Board of Digital Pathology Association. He was nominated on the Pathologist PowerList put out by the Pathologist for 2020 and 2021.



S. Joseph Sirintrapun, MD

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Dr. Sirintrapun is the Director of Pathology Informatics at Memorial Sloan Kettering Cancer Center (MSKCC) and an Associate Attending and member of the Warren Alpert Center for Computational Pathology at MSKCC. Dr. Sirintrapun is board certified in Anatomic and Clinical Pathology and Clinical Informatics. In addition to his work in informatics, he practices surgical pathology specializing in genitourinary tumors. Dr. Sirintrapun currently serves on the CAP Pathology Electronic Reporting Committee and Digital and Computational Pathology Committee, as well as on the ASCP Pathology Informatics Committee. He also serves as a section editor of Diagnostic Pathology. He is an active member of API for over ten years and is the current President-elect for API.

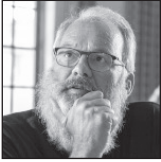


Snehal Sonawane, MBBS, MD, FASCP

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Snehal Sonawane, MB;BS, MD is a staff pathologist at South Bend Medical Foundation, in South Bend, IN, and serves as a Laboratory director for three laboratories in Indiana. After graduation from medical school, Dr. Sonawane undertook a post-graduate training program in Pathology and Laboratory Medicine and received a Diplomate from the National Board in Pathology from the Government Medical College in India. On completion, she went on to work as research scholar at the Translational Neurobiology Laboratory, University of Illinois at Chicago, College of Medicine. Subsequently, She completed Anatomic and Clinical pathology residency training at the University of Illinois College of Medicine in Chicago followed by a fellowship in Surgical/GI pathology at Loyola University Medical Center, near Chicago. Dr. Sonawane's innovative research has resulted in a number of manuscripts, abstracts and posters that has been published in peer reviewed journals and has been presented in poster and platform presentations. Her work has aided in the discovery of new treatment options for patients with severe dry eye disease. Her research has also led to grant proposals and patents that were successfully funded. She is the recipient of a Scholarly Activity award for her dedication to research during residency training at the University of Illinois at Chicago. More recently, Dr. Sonawane has been a contributing author and editor for the book entitled "Ace the board: Non-neoplastic Hematopathology". She is perusing masters in health informatics from Dakota State University and looking forward to get board certified in Clinical Informatics via practice pathway.



John Spinosa, MD, PhD, FACP

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John Spinosa, MD, PhD, FACP is Chief Medical Consultant to Lantana Consulting Group, Inc., a healthcare standards development consultancy with clients in industry, academia, and government. Dr. Spinosa practiced anatomic and clinical pathology at Scripps Memorial Hospital for over 20 years before starting a molecular diagnostics company that was later acquired by Foundation Medicine. During his career, Dr. Spinosa has held medical staff leadership positions at Scripps and several industry positions in specialized diagnostic companies. He is a participant on the College of American Pathologists (CAP's) Informatic Committee and is a representative to HL7 for the CAP. Dr. Spinosa was Medical Director at San Diego Blood Bank during development of an extended RBC genotyping assay using NGS.



Michelle Stoffel, MD, PhD

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Michelle Stoffel, MD, PhD, is the Associate CMIO for Laboratory Medicine and Pathology at the M Health Fairview health system and an Assistant Professor in the Department of Laboratory Medicine and Pathology at the University of Minnesota. Her academic and operational focus is on bridging the practice of informatics from the lab to clinicians and patients via the electronic medical record, with additional interests in clinical and pathology informatics education.



Michelle Stram, MD, ScM

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Michelle Stram MD, ScM is a Clinical Assistant Professor in the Department of Forensic Medicine at NYU and an attending Medical Examiner at the NYC Office of the Chief Medical Examiner (OCME). Dr. Stram has overseen the implementation of neuro-telepathology at the OCME and other pathology informatics endeavors. Dr. Stram is a member of the College of American Pathologists (CAP) Informatics Committee and the CAP Machine Learning Working Group, and serves as the API liaison for the CAP Informatics Committee.



Richard Torres, MD

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Dr. Torres is an Associate Professor of Laboratory Medicine at the Yale School of Medicine and a hematopathologist with clinical practice focus in flow cytometry, pathology informatics, serologic testing, and molecular diagnostics of hematopoietic diseases. He is Medical Director of the Flow Cytometry Laboratory and the Immunology Laboratory at Yale-New Haven Hospital. His research laboratory applies engineering advances to medical laboratory diagnostics, with primary work on the development and practical application of non-destructive three-dimensional reconstruction histology for clinical and investigative use.



Christy Wheaton

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Christy is currently serving as the VP and Chief Information Privacy and Security Officer of Henry Ford Health System, in Detroit, MI. She is a digital technology executive and strategic information security specialist with more than 25 years of experience. Prior to Henry Ford Health System, she served as Senior Director and Chief Information Security Officer for Meritor, Inc. in Troy, MI. and various security and technology leadership roles at GE Capital and Ally Bank.

Currently Wheaton serves as an advisor on the Kohl's cybersecurity advisory board, a board member (treasurer) on the Neurofibromatosis (NF) Team Foundation Board; and as a volunteer for the Children's Tumor Foundation.

She has a Master of Science degree in Business Administration with a focus on International Leadership and a Bachelor of Science degree in Business Administration, both from Madonna University. Wheaton is a Certified Information Systems Security Professional (CISSP).



Sarah Wheeler

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Dr. Sarah Wheeler is an Assistant Professor at the University of Pittsburgh, Department of Pathology, Medical Director of Clinical Chemistry at UPMC Children's Hospital of Pittsburgh, Medical Director of the Automated Testing Laboratory at UPMC Mercy Hospital, and Associate Medical Director of Clinical Immunopathology at UPMC.



Dennis Winsten, MS, FHIMSS, FCLMA

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Dennis Winsten is president of Dennis Winsten & Associates, a laboratory information systems consulting firm, headquartered in Tucson, Arizona. He has over 30 years of experience with clinical and anatomic pathology laboratory information systems from both a user's and provider's perspective and in-depth knowledge of the various vendor systems, user requirements, and market and laboratory trends. He holds Bachelor's degrees in engineering and physics from the University of Arizona and Penn State University. His Master of Science degree in educational psychology was earned at the University of Southern California (USC). In addition, post-graduate work included emphasis on computer science and completion of course requirements for a Ph.D. in statistics and research design at the University of Minnesota. Mr. Winsten has served on the Board of Directors of the Clinical Laboratory Management Association (CLMA) and was on the Advisory Board for Advance for Administrators of the Laboratory. Other professional affiliations include: Association for Pathology Informatics (API), Healthcare Information and Management Systems Society (HIMSS) and Clinical and Laboratory Standards Institute (CLSI) - Area Committee on Automation and Informatics. Published papers have included topics on laboratory system evaluation, selection, and installation, multi-site networks, system contract criteria, HIS interfacing, and other subjects related to laboratory information systems. He has been a speaker at numerous national seminars and professional meetings.



Mark Zarella, PhD

Deputy Director of Informatics, Johns Hopkins University

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Dr. Zarella's focus is in the deployment of digital pathology in clinical practice and the development and analysis of novel techniques in imaging, diagnostics, and artificial intelligence. His work relies on imaging modalities such as whole-slide imaging and optical coherence tomography (OCT) as well as computational

approaches such as deep learning, image processing, explainable AI, and visual and cognitive analytics.

He received his undergraduate degree in Physics at the University of Massachusetts and PhD in Neuroscience at the State University of New York in 2011. His research focus at SUNY was on cortical networks of the visual system, of which imaging and computation were important components. He carries that experience forward to digital pathology, inspired heavily by human vision and methods in vision research to develop (and explain) computer vision and decision networks.

Dr. Zarella joined the Johns Hopkins faculty in 2020. Prior to joining Johns Hopkins, Dr. Zarella was the Technical Director of Pathology Imaging & Informatics at Drexel University College of Medicine.

Dr. Zarella serves as a member of the board of directors of the Digital Pathology Association (DPA), a member of the College of American Pathologists (CAP) Digital and Computational Pathology Committee and AI Committee, and has contributed to several white papers on the topics of whole-slide imaging and computational pathology.



Yonah Ziemba, MD

Laboratory Medicine Fellow, Northwell Health

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Yonah Ziemba MD is a Fellow in Laboratory Medicine and Physician Administration at Northwell Health. He completed pathology residency training at Northwell, and was instrumental in Pathology Informatic training for residents at a national level through the Pathology Informatics Essentials for Residents (PIER) National Leadership Committee, and at an institutional level through implementation of Team-based learning sessions. Dr Ziemba's current work includes implementation of LOINC as the standard for normalization at an institutional Health Information Exchange, and a workflow app to notify transplant providers when a waitlisted patient is due for diagnostics necessary to remain eligible. He is passionate about teaching, and finding creative ways to use laboratory data for research and physician workflow improvements.

PI SUMMIT 2022 COVID SAFETY POLICY

The Association for Pathology Informatics (API) is excited to return to in-person educational events and the health and well-being of our attendees, exhibitors, and staff (collectively, “participants”) is our top priority. While participating in-person at the Pathology Informatics Summit, API will follow all suggested federal, state, and local preventive measures to reduce the spread of COVID-19; however, API cannot guarantee that participants, attendees, exhibitors, vendors, staff, or others in attendance (“participants”) will not become infected with COVID-19.

At this time the following practices will be in place for all PI Summit 2022 events held in-person in Pittsburgh:

- *In order to receive conference badges for in-person attendance, all participants checking-in at one of the contactless kiosks will be asked to attest that:*
 - *they are vaccinated and can provide proof of vaccination; or*
 - *they had a negative COVID-19 test (antigen or PCR) within the last 48 hours and are not exhibiting symptoms. The cost of tests will be at the participants' personal expense.*

Please note that participants may be asked to show their proof of vaccination or negative COVID test during check-in/registration/badging at the registration desk or during the event to PI Summit staff

All participants, regardless of vaccination status, will also have to complete a health survey and agreement to follow all safety guidelines outlined as follows:

- *Wear masks when and where required*
- *Practice social distancing when and where required*
- *Follow good personal hygiene practices*
- *Practice self-monitoring & self-reporting*
- *Follow the requirements of the host hotel and conference center that are in place at the time of the meeting*
- *Not travel to or attend the Summit if sick or symptomatic*
- *Take reasonable precautions to ensure your own comfort*

By registering for API's 2022 Summit, participants acknowledge the inherent risks in attending an in-person conference and that exposure or infection may result in quarantine requirements, serious illness, permanent disability or death. By registering to attend in-person, participants agree to follow all health and safety precautions and requirements outlined by the API, the meeting venue and other partners for the API. Should any participant violate this agreement, they may be asked to leave the meeting with no refund of any related expenses and their membership be subject to review.

Additional Protocols

- *Hand sanitizing stations will be located at key locations throughout the the David L. Lawrence Convention Center.*
- *Regular cleaning and sanitation practices will be conducted at the David L. Lawrence Convention Center and The Westin Pittsburgh by their respective staffs.*

For the David L. Lawrence Convention Center's Health and Safety Plan, please visit:

<https://www.pittsburghcc.com/planners/back-to-business/>

For The Westin Pittsburgh's Commitment to Clean, please visit: <https://clean.marriott.com/>

For the Commonwealth of Pennsylvania Covid policies, please visit:

<https://www.pa.gov/guides/responding-to-covid-19/#COVIDMitigationinPennsylvania>

Additional Information

Nearest Hospitals:

- *UPMC Mercy, 1400 Locust St, Pittsburgh, PA 15219; +1-412-232-8111; Distance 1.0 mi.*
- *Allegheny General Hospital, 320 E North Ave, Pittsburgh, PA 15212, +1-412-359-3131; Distance 1.1 mi.*

Registered attendees and participants will receive email notifications as updates or new information becomes available.

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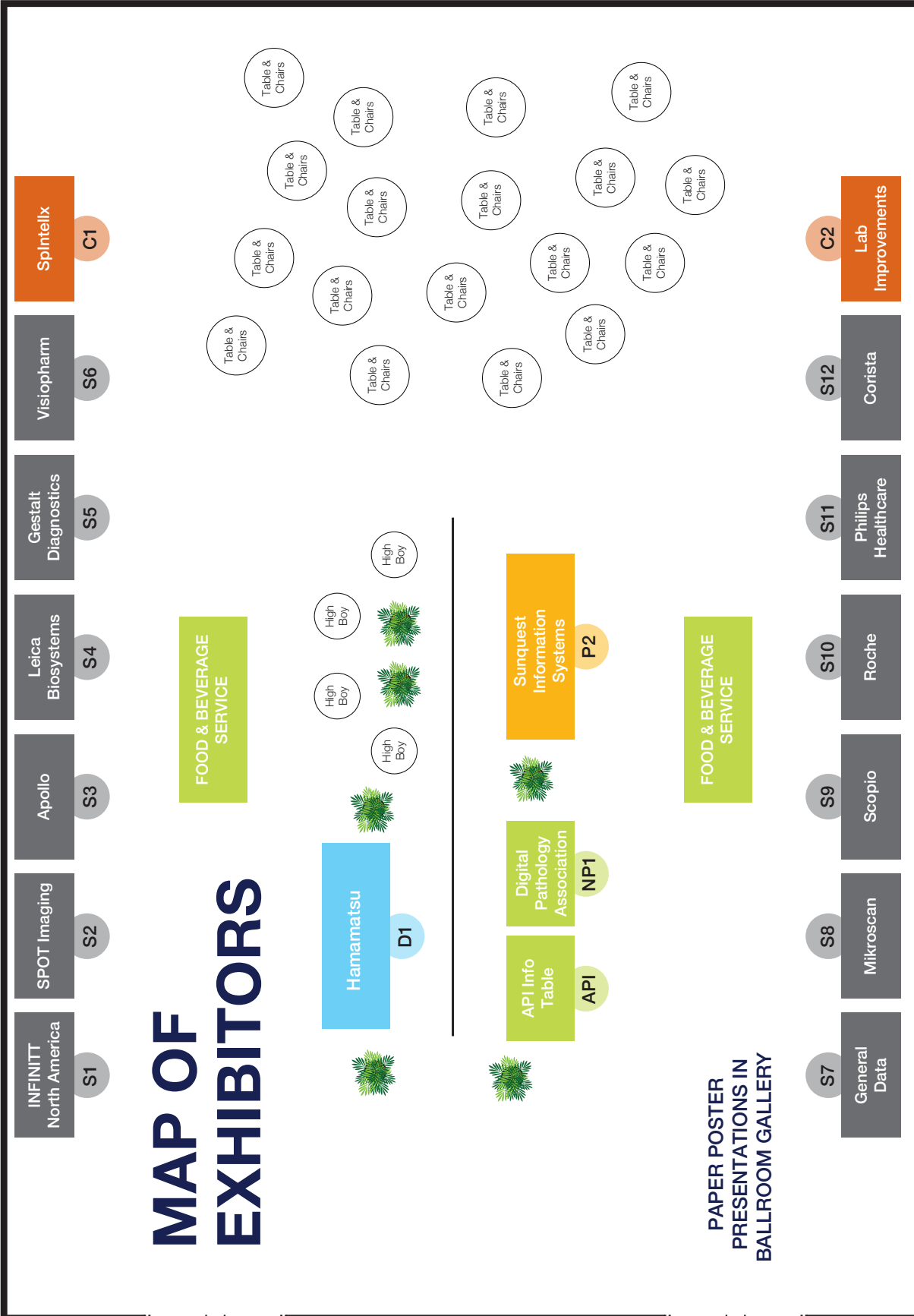
PORT CHARLOTTE BLVD



Fresh air is built-in at the David L. Lawrence Convention Center. The curving roof is actually the main component of an innovative ventilation system which harnesses natural air movements.

David L. Lawrence Convention Center
BALLROOM A – EXHIBITORS
 Pathology Informatics Summit 2022

DIAMOND EXHIBITOR	PLATINUM EXHIBITOR	SILVER EXHIBITORS	COPPER EXHIBITORS
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BALLROOM B – MAIN SESSIONS

BALLROOM C – EXHIBITOR STORAGE

ASSOCIATION FOR PATHOLOGY INFORMATICS UPCOMING 2022-2023 EVENTS

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- Operations from Multiple Perspectives with Making Digital, AI, and integrative Diagnostics Work in Practice
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About the *Journal of Pathology Informatics*

The *Journal of Pathology Informatics (JPI)* is an open access peer-reviewed journal dedicated to the advancement of pathology informatics. This is the official journal of the Association for Pathology Informatics (API). The journal aims to publish broadly about pathology informatics and freely disseminate all articles worldwide. This journal is of interest to pathologists, informaticians, academics, researchers, health IT specialists, information officers, IT staff, vendors, and anyone with an interest in informatics. We encourage submissions from anyone with an interest in the field of pathology informatics. We publish all types of papers related to pathology informatics including original research articles, technical notes, reviews, viewpoints, commentaries, editorials, symposia, meeting abstracts, book reviews, and correspondence to the editors. All submissions are subject to rigorous peer review by the well-regarded editorial board and by expert referees in appropriate specialties. The *Journal of Pathology Informatics* is unique because it is the only journal that is entirely dedicated to the field of Pathology Informatics and serves a global community of informatics.

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