



ATTIS 2023

ANNUAL TRANSLATIONAL AND TRANSFORMATIVE
INFORMATICS SYMPOSIUM

"AI in Medicine and Healthcare"

April 21, 2023 (Friday)

8:00 AM – 5:00 PM CDT

At

Margaret Cameron Spain Auditorium

620 19th Street South, Birmingham, AL 35233

and

*Syndicated online
(Webcast Link to be provided)*

PROGRAM (DRAFT)

8:00 AM – 8:15 AM

Seating

8:15 AM - 8:30 AM

Introduction by the Chair

[Jake Y. Chen, Ph.D.](#)

Professor and Chief Bioinformatics Officer, UAB Informatics Institute

8:30 AM - 9:30 AM

Keynote Speech

[Trey Ideker, Ph.D.,](#)

Professor of Medicine, Bioengineering, and Computer Science, the University of California San Diego

9:30 AM - 9:45 AM

Coffee Break

9:45 AM – 11:00 AM

Technical Session

“AI/ML Application in Biomedicine and Clinical Practice”

Session Chair: [Chindo Hicks, Ph.D.](#)

Professor of Genetics, Louisiana State University School of Medicine

- **“AI for Opportunistic Screening on CT”** by [Andrew Smith, M.D., Ph.D.](#), Vice Chair of Innovation and Radiology, University of Alabama at Birmingham
- **“AI for Precision Medicine”** by [Matthew Might, Ph.D.](#), Director of Hugh Kaul Precision Medicine Institute, University of Alabama at Birmingham
- **“Radiogenomics and the Role of AI in Medical Imaging”** by [Houman Sotoudeh, M.D.](#), Director of Neuroradiology Clinical Research, Associate Professor of Neuroradiology and Neurology, University of Alabama at Birmingham
- **“AI.MED: Rethinking Drug Discovery Approaches with AI”** by [Jake Y. Chen, Ph.D.](#), Chief Bioinformatics Officer, Informatics Institute, Professor, Genetics, Computer Science and Biomedical Engineering, University of Alabama at Birmingham
- **“Integrating Artificial Intelligence for Antiviral Drug Discovery”** by [Sixue Zhang, Ph.D.](#), Head of Computer-Aided Drug Discovery, Scientific Platforms, Southern Research

11:00 AM – 12:00 PM

Application Flash Talk Session**Session Chair:** [Elliot Lefkowitz, Ph.D.](#)

Professor, Department of Microbiology, University of Alabama at Birmingham

- **“Analyzing Cardiac Single-cell RNA Sequencing Data by Auto Encoder”** by [Thanh Nguyen, Ph.D.](#), Postdoc Trainee, Department of Biomedical Engineering, University of Alabama at Birmingham
- **“Avoiding the Artificial Ignorance Trap: Applying AI in Oncology Drug Response Prediction Wisely”** by Karim Budhwani, Ph.D., Hugh Kaul Precision Medicine Institute, University of Alabama at Birmingham
- **“Promoting Interdisciplinary Research with AI and Big Data Infrastructure”** by [Da Yan, Ph.D.](#), Assistant Professor, Department of Computer Science, University of Alabama at Birmingham
- **“Drug SMILE Feature Extraction Tool for AI-based Drug Development”** by [Rahul Sharma, Ph.D.](#), Informatics Institute, University of Alabama at Birmingham
- **“A Machine Learning-Based Model to Predict Response to Neoadjuvant Chemotherapy in Patients with Triple-Negative Breast Cancer”** by [Timothy Fisher, M.S.](#), Department of Biology, Georgia State University
- **“Deep Learning-Based Automated Kidney and Cyst Segmentation for Patients Affected by ADPKD using Single vs. Multi-Institutional Data”** by Emma Kay Schmidt, Department of Radiology, Biomedical Engineering, University of Alabama at Birmingham

12:00 PM – 1:30 PM

Posters Over Lunch

- Box lunch will be provided to those who prepay during registration

Session Chair: [Dr. Amy Wang, M.D., MBI](#)

Associate Professor of Medicine and Family and Community Medicine, UAB Informatics Institute

- **“Machine Learning-Based Models To Predict Metastatic Clinical Outcomes Of Triple-Negative Breast Cancer Patients”** by [Timothy Fisher, M.S.](#), Department of Biology, Georgia State University
- **“Predicting Chemical Toxicity by Applying a Hierarchical Bayesian Approach with Priors to the Tox21 Assay Data”** by [Wenyu Zeng](#), Division of Preclinical Innovation, National Center for Advancing Translational Sciences – National Institutes of Health

- **“Effect of Principal Component Analysis on UNet-Based Architecture for Automatic Segmentation of ADPKD Kidney and Cyst Segmentation”** by Chetana Krishnan, Department of Biomedical Engineering, University of Alabama at Birmingham
- **“Mammonc-DB: A Web-based User-friendly Tool for Comprehensive Multi-omics Data Analysis in Breast Cancer”** by [Santhosh Kumar Karthikeyan](#), Graduate of Biomedical Sciences, University of Alabama at Birmingham
- **“GeneTerrain: A Interactive Platform for Visual Exploration of Genes and Gene Networks for Complex Disease Studies”** by [Ehsan Saghapour](#), Postdoctoral Fellow, University of Alabama at Birmingham
- **“UAB Biological Data Sciences (U-BDS) Core Delivers Accessible Computational Resources to the UAB Research Community”** by [Bharat Mishra](#), Genetics Research Division, University of Alabama at Birmingham
- **“Opportunities for Deep Learning Applications on High Order Chromatin Interactions”** by Justin Bridges, Department of Biomedical Engineering, University of Alabama at Birmingham
- **“A Machine Learning Model to Evaluate the Association between the Tumor Microenvironment and Neighborhood Deprivation in Black and White Women with Triple Negative Breast Cancer”** by Muhammed Lafith Mattara, School of Health Professions, University of Alabama at Birmingham

1:30 PM – 3:00 PM

Tutorial Session

“Large Language Models in AI: What’s New About ChatGPT?”

[John Osborne, Ph.D.](#)

Associate Professor of Medicine and Computer Science, UAB Informatics Institute

3:00 PM – 3:15 PM

Coffee Break

3:15 PM – 4:15 PM

Expert Panel Discussion

“AI in Medicine: A 360 Approach to Organization”

Moderator: [Rubin Pillay, Ph.D.](#),

Chief Innovation Officer, Heersink School of Medicine

Panelists:

- [Matt Might, Ph.D.](#), Director, Hugh Kaul Precision Medicine Institute
- [Yuliang Zheng, Ph.D.](#), Chair of the Department of Computer and Information Sciences
- [Jake Y. Chen, Ph.D.](#), Professor and Chief Bioinformatics Officer, UAB Informatics Institute

4:15 PM – 4:30 PM

Closing Remarks

[James J. Cimino, M.D.](#)

Distinguished Professor and Director, UAB Informatics Institute

4:30 PM – 6:00 PM

Social Networking Event

Refreshments will be provided, co-hosted by the UAB Informatics Club