FEBRUARY 20, 2024

The Cooley University Life Center

7440 Cambridge Street, Houston, Texas 77054

INFORMATIONAL PACKET

UTHealth Houston

Welcome to the TMC AI Summit 2024

Inaugural Conference

On the following pages, you will find important information about the conference. If you require any assistance, do not hesitate to contact Carina Wang at wanjing.wang@uth.tmc.edu.

Event Information

We are delighted to welcome you to the First Annual TMC AI Summit, hosted by the McWilliams School of Biomedical Informatics (MSBMI) at UTHealth.

This summit will gather some of the brightest minds in medicine, technology, and research from Texas and beyond, to explore AI's transformative potential in healthcare.

It offers a platform to delve into the current landscape of healthcare AI and to reflect on its future prospects and challenges.

On-Site Check-In

Guest on-site check-in will occur in the University Life Center Lobby. This is where the TMC AI Summit begins. Our staff will be stationed to assist you with the registration process.

Please plan to arrive at the University Life Center Lobby a bit early to allow ample time for registration. This will help us kick off the event on time and enable you to fully enjoy all the exciting activities we have planned for you.

WIFI Instructions

Access the UTHealth Houston WIFI via the following website:
https://cloud.securew2.com/public/21553/Wireless_Configuration-Production/

The website will detect your configuration and then connect by selecting the JoinNow icon. If your device detected is incorrect, then select the correct device from the drop-down list.

Meals Included

Breakfast and lunch will be catered and served in the main event space. There will also be coffee breaks and snacks immediately following closing remarks in the main event space.

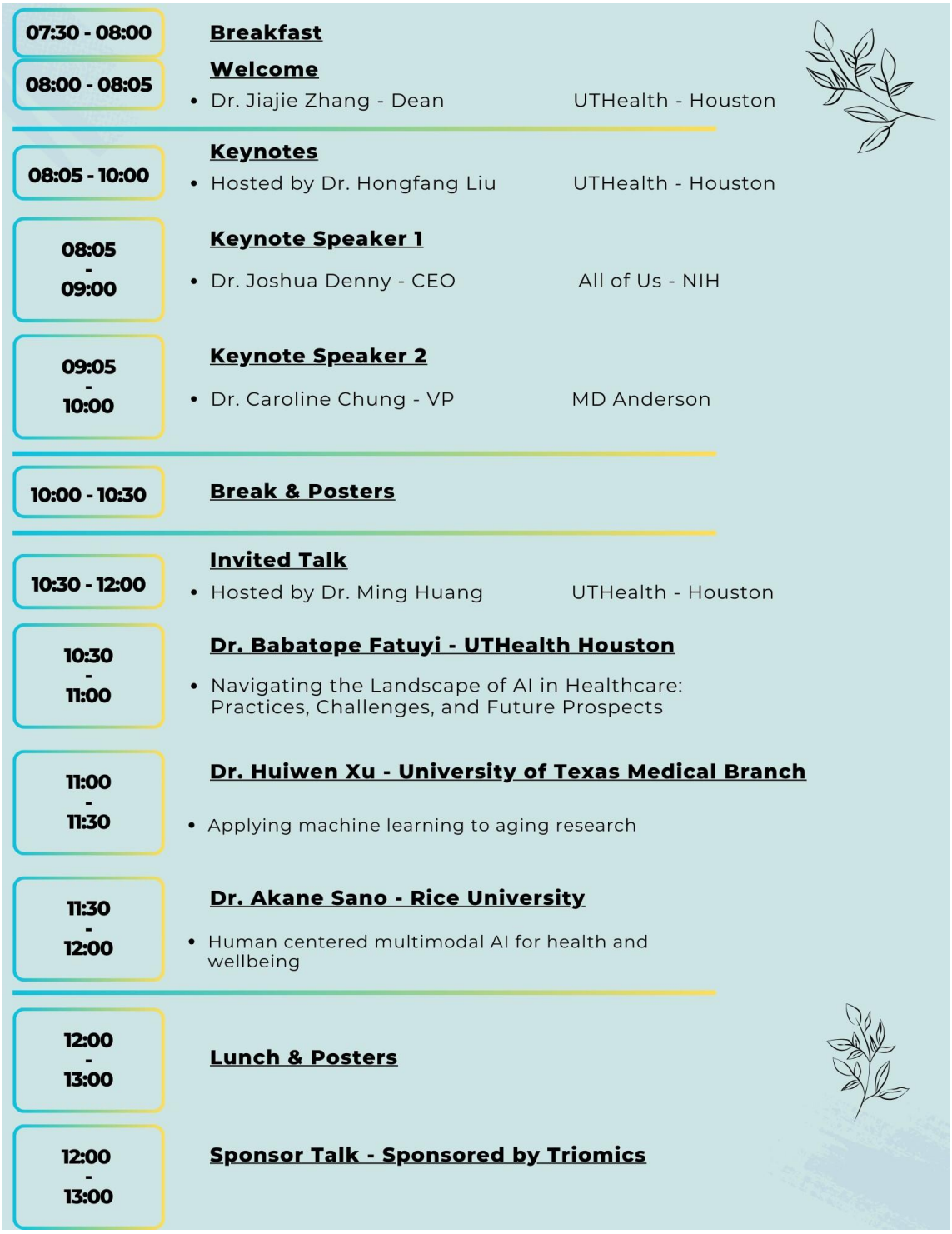
Emergency Information

Emergency information is available at https://www.uthealthhoustonemergency.org/.

TMC AI Summit 2024

Agenda

Tuesday, February 20, 2024, 7:30 AM – 5:35 PM | The Cooley University Life Center |



TMC AI Summit 2024

Tuesday, February 20, 2024, 7:30 AM – 5:35 PM | The Cooley University Life Center |

13:00 - 14:30 — **Invited Talk**

- Hosted by Dr. Liwei Wang — UTHealth - Houston

13:00 - 13:30 — **Dr. Jennifer St. Sauver - Mayo Clinic**

- Designing studies to ensure rigorous development and testing of novel artificial intelligence (AI) technologies

13:30 - 14:00 — **Dr. Stephen Yi - University of Texas at Austin**

- AI and data science network models for precision oncology: A step closer from bench to bedside

14:00 - 14:30 — **Dr. Jia Zeng - MD Anderson**

- How to make artificial intelligence-augmented clinical decision support (CDS) a reality: a review of the state-of-the-art AI technologies for CDS in precision oncology and the desiderata for their clinical applications

14:30 - 15:00 — **Break & Posters**

15:00 - 16:00 — **Panel**

Panel Topic: Opportunities and Challenges of Generative AI in Real-world Healthcare Applications

- Dr. Elmer Bernstam — UTHealth - Houston
- Dr. Xia Hu — Rice University
- Dr. Xiaoqian Jiang — UTHealth - Houston
- Dr. Lu Tang — Texas A&M University
- Moderated by Dr. Kirk Roberts — UTHealth - Houston

16:00 - 17:30 — **Showcase/Competition**

- Hosted by Dr. Sunyang Fu — UTHealth - Houston

Judge:

- Dr. David Jaffray — MD Anderson
- Dr. GQ Zhang — UTHealth - Houston
- Dr. Jim Zheng — UTHealth - Houston

17:30 - 17:35 — **Closing**

Speaker Biographies

Dr. Joshua Denny is the Chief Executive Officer of the National Institutes of Health's All of Us Research Program. All of Us seeks to enroll at least 1 million diverse participants to build an indispensable resource that accelerates precision medicine for all populations.

Dr. Denny has been involved since the program's inception. He was a member of the Advisory Committee to the NIH Director Precision Medicine Initiative Working Group, which developed the program's initial scientific blueprint. He then led the program's initial prototyping project and the All of Us Data and Research Center. Dr. Denny was named CEO of All of Us in January 2020. Prior to joining NIH, Dr. Denny was a professor of biomedical informatics and medicine, founding director of the Center for Precision Medicine, vice president for personalized medicine at Vanderbilt University Medical Center, and a practicing physician. There, he led discovery and implementation projects in precision medicine, including clinical pharmacogenomics and Vanderbilt's DNA biobank. He was a pioneer in the use of electronic health records for genomics studies, including the initial descriptions of phenome-wide association studies (PheWAS) and phenotype risk scores.

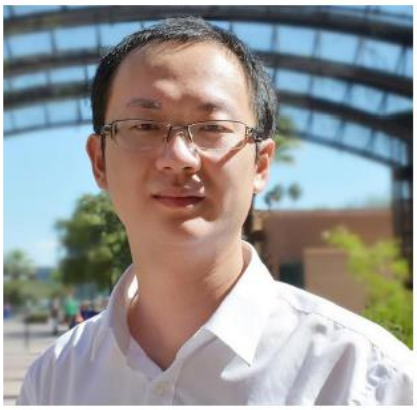
In addition to his leadership role with All of Us, Dr. Denny oversees the Precision Health Informatics Section at the National Human Genome Research Institute. There he and his team leverage large-scale biobanks to discover gene-disease relationships by using electronic health records to illuminate shared genetic architecture across diseases. At Vanderbilt, Dr. Denny was a PI for nodes in the Electronic Medical Records and Genomics (eMERGE) Network, the Pharmacogenomics Global Research Network (PGRN), and the Implementing Genomics in Practice (IGNITE) Network. Dr. Denny is a recognized expert in genomics, informatics, and precision medicine and is an author of more than 350 peer-reviewed publications.

He is an elected member of the National Academy of Medicine, the American Society for Clinical Investigation, and the American College of Medical Informatics. Follow Dr. Denny on Twitter at @AllofUsCEO.

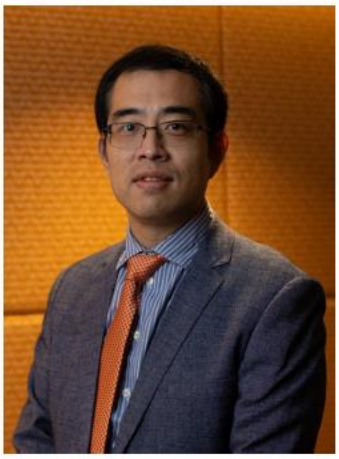
Dr. Caroline Chung is Vice President and Chief Data Office and Director of Data Science Development and Implementation of the Institute for Data Science in Oncology at MD Anderson Cancer Center. She is a clinician-scientist, associate professor in Radiation Oncology and Diagnostic Imaging with a clinical practice focused on CNS malignancies and a computational imaging lab focused on quantitative imaging and modeling to detect and characterize tumors and toxicities of treatment to enable personalized cancer treatment. Motivated by challenges observed in her own clinical and research pursuits, Dr. Chung has developed and leads institutional efforts to enable quantitative measurements for clinically impactful utilization and interpretation of data through a collaborative team science approach, including the Tumor Measurement Initiative (TMI) at MD Anderson. Internationally, Dr. Chung leads several multidisciplinary efforts to improve the generation and utilization of high quality, quantitative data to drive research and impact clinical practice, including her role as Vice Chair of the Radiological Society of North America (RSNA) Quantitative Imaging Biomarker Alliance (QIBA), Co-Chair of the Quantitative Imaging for Assessment of Response in Oncology Committee of the International Commission on Radiation Units and Measurements (ICRU) and National Academies of Sciences, Engineering, and Medicine (NASEM)-appointed committee addressing Foundational Research Gaps and Future Directions for Digital Twins. Beyond her clinical, research and administrative roles, Dr. Chung enjoys serving as an active educator and mentor with a passion to support the growth of diversity, equity and inclusion in STEM, including her role as Chair of Women in Cancer (http://www.womenincancer.org/) , a non-for-profit organization that is committed to advancing cancer care by encouraging the growth, leadership and connectivity of current and future oncologists, trainees and medical researchers.

Dr. Elmer V. Bernstam completed medical school at The University of Michigan Medical School and completed his residency in Internal Medicine at St. Joseph Mercy Hospital in Ann Arbor, Michigan, 1995-1998. In addition to his MD, Dr. Bernstam holds Master's degrees in computer engineering and biomedical informatics. He completed a National Library of Medicine post-doctoral fellowship in informatics at Stanford Medical Informatics.

Dr. Bernstam joined UTHealth at Houston in 2002 and currently holds a joint appointment at the McWilliams School of Biomedical Informatics (SBMI) and the Department of Internal Medicine (McGovern Medical School). Dr. Bernstam heads the biomedical informatics component of the UTHealth/MD Anderson Center for Clinical and Translational Sciences (CCTS) (Clinical and Translational Science Award). His research focuses on translational biomedical informatics, consumer informatics, and information retrieval. Dr. Bernstam's research has been funded by the NIH, NSF, the Gulf Coast Consortium for Computational and Structural Biology, the Medical Letter, NASA, and the Robert Wood Johnson Foundation. Dr. Bernstam is board-certified in internal medicine and maintains an active clinical practice as a hospitalist. He is a fellow of the American College of Physicians (ACP) and the American College of Medical Informatics (ACMI).



Dr. Xia "Ben" Hu is an Associate Professor at Rice University in the Department of Computer Science. Dr. Hu has published over 200 papers in several major academic venues, including NeurIPS, ICLR, KDD, WWW, IJCAI, AAAI, etc. An open-source package developed by his group, namely AutoKeras, has become the most used automated deep learning system on Github (with over 8,000 stars and 1,000 forks). Also, his work on deep collaborative filtering, anomaly detection and knowledge graphs have been included in the TensorFlow package, Apple production system and Bing production system, respectively. His papers have received several Best Paper (Candidate) awards from venues such as ICML, WWW, WSDM, ICDM, AMIA and INFORMS. He is the recipient of NSF CAREER Award and ACM SIGKDD Rising Star Award. His work has been cited more than 20,000 times with an h-index of 60. He is the conference General Co-Chair for WSDM 2020 and ICHI 2023.

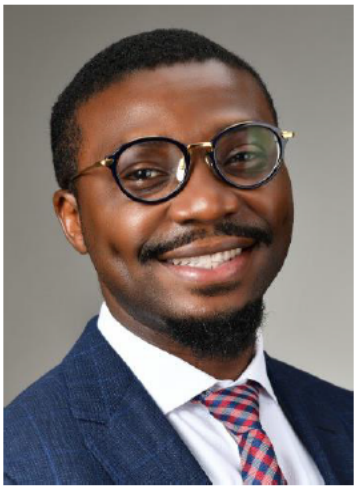


Dr. Xiaoqian Jiang is the Associate Vice President of Medical AI at the University of Texas Health Science Center at Houston (UTHealth). He also holds the Department Chair of Data Science and artificial Intelligence position, and is honored to be the Christopher Sarofim family professor. Additionally, he serves as the center director of Secure Artificial intelligence For hEalthcare (SAFE) in the McWilliams School of Biomedical Informatics (MSBMI) at UTHealth. He was an associate editor of BMC Medical Informatics and Decision Making and serves as an editorial board member of the Journal of American Medical Informatics Association. His expertise is primarily in health data privacy and predictive models in biomedicine, drawing from his Computer Science Ph.D. training at Carnegie Mellon University. He received NIH R00, R13, R21, R01, U01 grants as PI, obtained career awards like CPRIT Rising Stars and UT Stars, and won best and distinguished paper awards from American Medical Informatics Association (AMIA) Annual symposiums and the Joint Summits on Translational Science (2012, 2013, 2016, 2020). He is one of the organizers of the iDASH Genome Privacy competition (2014 - present), which Nature News and GenomeWeb reported.

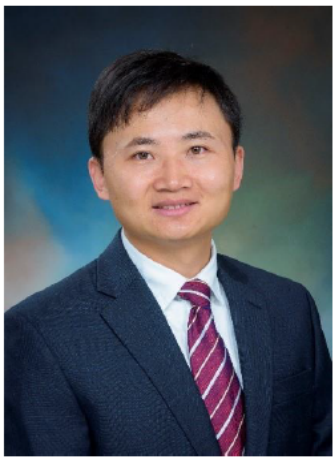
Dr. Lu Tang is Professor of Communication and the Director of the Data Justice Lab affiliated with the Texas A&M Institute of Data Science. She studies how emerging technologies such as AI, chatbots, and VR can be used for health promotion with a special emphasis on ethics and social justice. She also studies the content and diffusion of health information and misinformation on social media using computational methods such as natural language processing and social network analysis. Her work focuses on health disparity and minority health. Her work is supported through funding from the NIH, the Cancer Prevention and Research Institute of Texas, and the Robert Woods Johnson Foundation.

Dr. Kirk Roberts joined the McWilliams School of Biomedical Informatics at UTHealth Houston, formerly UTHealth Houston School of Biomedical Informatics (SBMI) on April 16, 2016 as an assistant professor. On September 1, 2021, Dr. Roberts was promoted to Associate Professor. He has previously conducted research in natural language processing (NLP) in academia, government, and industry. His research work includes using NLP to both extract structured information from unstructured free text and create interactive natural language applications, such as question answering systems and search engines. He actively performs research in clinical information extraction, spatial information extraction, question answering, and information retrieval. His research draws inspiration from fields as diverse as medicine, linguistics, health data science, and machine learning. Roberts is also the primary organizer of the TREC Clinical Decision Support track and a recipient of a National Library of Medicine Career Development Award.

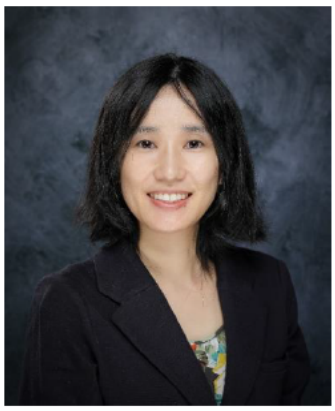
"There is a tremendous amount of biomedical data generated every day," said Roberts. "To be useful, that data must be available to researchers, health professionals, and consumers, and biomedical informatics is at the core of this dissemination process. So much of that data is in natural language because this is how we as humans prefer to communicate. Systems that understand medical language are therefore crucial to leverage all this data to advance health and healthcare."



Dr. Babatope Fatuyi serves as Chief Medical Information Officer for UTHealth Houston and is a part-time faculty member at the McWilliams School of Biomedical Informatics (SBMI). He has an extensive operational and IT leadership history at all levels of Clinical Informatics Initiative with Proven outcomes. At UTHealth Houston, Dr Fatuyi Chairs the EHR Governance Taskforce which is responsible for the approval, direction setting and prioritization of EHR designs and content decisions to ensure that the best possible patient care is achieved using the EHR as an effective tool by way of the subcommittees/councils. He is also the Steering Committee Chair of the Center for Digital Healthcare Innovation (CDHI) at UTHealth Houston. CDHI at UTHealth Houston is set with a purpose to attain the sustenance of an end-to-end integrated, patient-centric EHR for the support of care-delivery, education and research. The Center focuses on the utilization of informatics and digital trends to drive maximal ROI on institutional investments in particular operational infrastructure and clinical technology. Dr. Fatuyi previously served as the Physician and Healthcare Executive/Informaticist of The Advisory Board Company (now Optum Health), providing long-term management, interim management, and consulting services to hospitals, health systems, academic medical centers, and large, independent physician practices, he served clients contractually by providing an in-depth knowledge of Cerner and EPIC implementations, hospital workflows, and optimization. He is accustomed to transitioning his skills to his client's needs and dealing effectively with all corporate and hospital staff levels. Further, he served as the Chief Medical Information Officer for NYC Health + Hospitals. He was part of the various waves of the transition across the five boroughs of New York City. Dr. Fatuyi has engaged in over 20 hospital transitions/implementations with multi-years of a multifaceted approach to physician engagement.

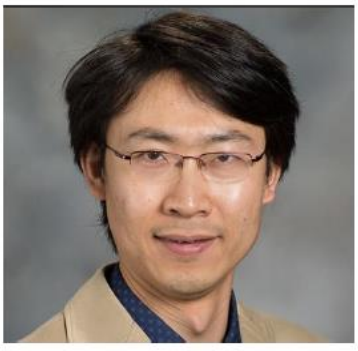


Dr. Huiwen Xu is an aging-focused health services researcher at the School of Public and Population Health and the Sealy Center on Aging at University of Texas Medical Branch (UTMB). Dr. Xu's research examines the staffing, quality, disparity, and policy in nursing homes using large administrative and survey data. He is also interested in applying machine learning to aging research and has built various supervised and unsupervised machine learning models. He was selected as an RL5 Pepper Scholar by UTMB Pepper OAIC Center and has recently received a 4-year $1.35 million R01 grant from the National Institute on Aging (R01 AG081282, 2023-2027). He participated in multiple NIH-funded projects in cancer survivorship prior to joining UTMB. Dr. Xu has published 60 peer-reviewed articles in leading medical and policy journals including The Lancet, JAMA Oncology, Journal of Clinical Oncology, JAGS, JAMDA, Health Affairs, Health Services Research, and Medical Care; he coauthored one book chapter and 80+ scientific abstracts. His work has been cited 2,000+ times, with an H-index of 22. Dr. Xu holds leadership positions at the AcademyHealth, NIA AWARD Network for Dementia Workforce Research, Cancer and Aging Research Group, and China Health Policy and Management Society. He was an Associate Editor of BMC Health Services Research and serves as a scientific reviewer for NIH and 20+ scientific journals. Dr. Xu received several national and international awards. He earned his PhD in Health Services Research and Policy with Data Science training from the University of Rochester Medical Center.



Dr. Akane Sano is an Assistant Professor at Rice University, Department of Electrical Computer Engineering, Computer Science, and Bioengineering. She directs the Computational Wellbeing Group and is a member of Rice Digital Health Initiative. Her research focuses on data science, machine learning, and human-centered intelligent systems for health and wellbeing. She has been developing tools, algorithms, and systems to measure, forecast, understand and improve health and wellbeing using multimodal data from mobile and wearable devices in daily life settings, and clinical assessment. She received her Ph.D. at the Massachusetts Institute of Technology and her MEng and BEng at Keio University, Japan. Her recent awards include the NSF Career Award, the Best of IEEE Transactions on Affective Computing 2021, the Best Paper Award at IEEE BHI 2019 conference.

Dr. Jennifer St. Sauver is a Professor of Epidemiology in the Mayo Clinic School of Medicine. She received her MPH and PhD degrees in Epidemiology from the University of Michigan. After graduation, she joined Mayo Clinic as a Collaborative Scientist in 1999. She is an epidemiologic methodologist, with extensive experience in the design and conduct of observational research studies. In particular, she is Co-Director of the Rochester Epidemiology Project (REP), a unique research infrastructure that captures healthcare information from multiple providers for the population of southern Minnesota and western Wisconsin. As a collaborative scientist, she has worked with a wide range of investigators to leverage this resource to address many different health related questions. Her current research focuses on using the REP to understand the impact and outcomes of multiple chronic conditions at the population level. She is also an affiliate member of the Mayo Clinic Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, with specific interest in community-based interventions to improve population health.



Dr. Stephen Yi is Director of Bioinformatics at Livestrong Cancer Institutes and Dell Medical School, the University of Texas at Austin. He is also faculty at Oden Institute for Computational Engineering and Sciences, and Department of Biomedical Engineering. Before joining UT Austin, Dr. Yi was a faculty member at MD Anderson Cancer Center. Dr. Yi has received numerous awards, including NIH Outstanding Investigator Award, NIH Early Career Development Award, Komen Scholar, and RCSA Scialog Fellow Award. Dr. Yi's research was widely recognized and published in high-impact journals such as Cell, Cancer Cell, and Nature Reviews Genetics.

Dr. Jia Zeng is the Project Director at the Department of Precision Oncology Decision Support (PODS), under the Division of Pathology and Laboratory Medicine at MD Anderson Cancer Center. In this role, she leads in the architecture and development of the informatics infrastructure that supports the PODS team's mission which is to provide clinical decision support to oncologists that facilitates matching the right drug to the right patient at the right time based upon the molecular profile of the patient's tumor. Dr. Zeng received her PhD degree in Computer Science from the University of Calgary in 2009. Her research interests included information retrieval, using machine learning and multi-agent system to identify motifs in human genomes, building breast cancer classifier as well as other biomedical related topics. After receiving postdoctoral training at Baylor College of Medicine under an interdisciplinary computational cancer biologist fellowship from the Cancer Prevention Institute of Texas, in 2012, she joined MD Anderson Cancer Center and started leading the efforts to build an overarching informatics infrastructure for personalized cancer medicine at the world's leading cancer hospital.

STEERING COMMITTEE

Xia Hu
Rice University

David Jaffray
MD Anderson

Xiaoqian Jiang
UTHealth

Lydia E. Kavraki
Rice University

Hongfang Liu
UTHealth

Kirk Roberts
UTHealth

GQ Zhang
UTHealth

Jim Zheng
UTHealth

ORGANIZATIONAL COMMITTEE

Sunyang Fu

UTHealth

Ming Huang

UTHealth

Liwei Wang

UTHealth

Map

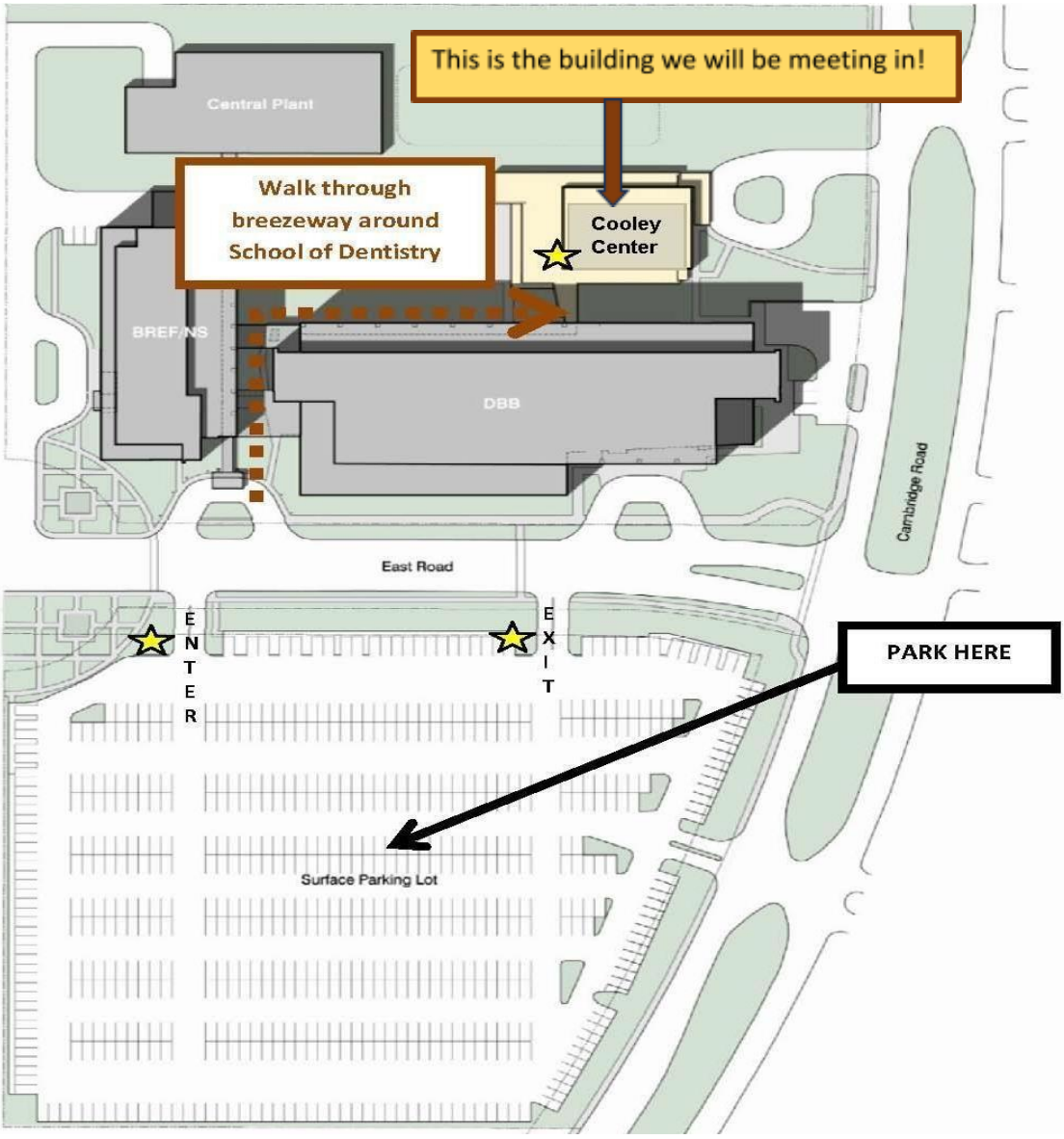
Facility Contact Information	
Contact Name	**Email**
Carina Wang	wanjing.wang@uth.tmc.edu

Location: The Cooley University Life Center at UTHealth Houston
7440 Cambridge St., Houston, Texas 77054

Parking

The **Cooley Center** is located at 7440 Cambridge Street, Houston, Texas 77054.

Cooley Center Parking is located at 1941 East Road Houston, Texas 77054.



Parking

PARKING INSTRUCTIONS

Please park in RPC lot on 1941 East Road (across from UTHealth Dental Bldg). Pull parking ticket upon entrance and keep with you. Walk-up payment kiosks are located in the Cooley Center and in the parking lot. Payment may be made by cash, debit card, or credit card. If parking  validations have been purchased for your event they may be picked up at your guest registration.

ENTRANCE TO COOLEY CENTER

Return to the parking entrance and cross over East Road. Proceed straight through breezeway, bear right and walk through the courtyard to enter through the Cooley Center patio entrance.

PARKING INSTRUCTIONS FROM BLOSSOM HOTEL

Complimentary parking is available on-site at Blossom Hotel. Blossom Hotel offers a complimentary shuttle service to the Cooley Center on a first-come, first-serve basis. Parking at the Cooley Center is also available at a cost of $10/day.