NSF EPSCoR Workshop: Artificial Intelligence (AI) with No-Boundary Thinking (NBT) to Foster Collaborations in Research, Education and Training

Mural Link: tinyurl.com/NBTmural Program Link: tinyurl.com/NBTprogram
Please use the QR codes or links above to access the event resources

Welcome to Downtown Little Rock, Arkansas
Event Agenda (all times in Central)

Sunday April 3, 2022

Venue: Clinton Presidential Center, 1200 President Clinton Ave, Little Rock, AR 72201

<mark>* Proof of Vaccine required upon entry. Please bring your vaccine cards (or a photo of it) with you to the event.</mark>

Transportation: A shuttle bus has been arranged to transport attendees from the Marriott to the Clinton Center in two trips at 4:45 and 5:00, then returning to the Marriott at 8:30 and 8:45. Other transportation options include Uber and the Little Rock Taxi service (501-222-2222).
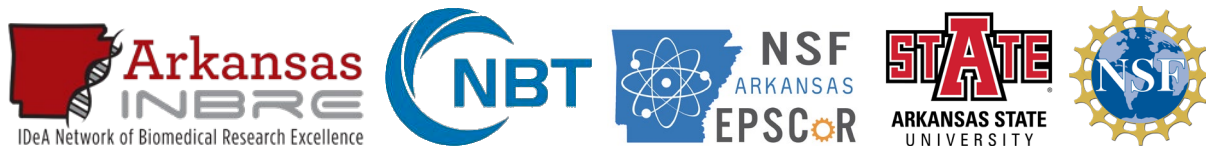
5:00PM   Reception Arrival & Registration
Attendees will arrive at the Clinton Center, provide proof of COVID19 vaccination, then proceed through the security checkpoint to the Great Hall on the second floor. Check in with the registration table to receive your nametag and meal selection card.

5:30PM   Welcome & Introductory Remarks
- Introduction by Jennifer Fowler, Arkansas NSF EPSCoR PI/PD, & Dr. Tom Risch, A-State Vice Provost for Research & Tech Transfer, Arkansas Biosciences Institute Executive Director
- Video Message from Dr. Kelly Damphousse, A-State Chancellor
- Dr. Alan Utter, A-State Provost and Executive Vice Chancellor for Academic Affairs and Research

6:00PM   Dinner Served
A plated dinner will be served based on meal selections identified during conference registration.

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6:30PM   **AI Campus Student Awards Ceremony & Showcase**
- Introduction by Dr. Emily Bellis & Dr. Jake Qualls
- Student Awards presented by Dr. Alan Utter, Dr. Karl Walker, Dr. Abhijit Bhattacharyya
- Brendan Kosnik, Shelby McCormick, Caity Sims – Herbarium Images
- Zach Caspall - Fire Detection
- Muhammad Ashraf - Natural Language Processing
- Jason Causey - Agricultural Imaging
- Emilio Chavez - Maize Genomics
- Winthrop Harvey, Jose Azucena - Reinforcement Learning with Connect Four
- Chris Saldivar - COVID-19 study with Chest X-Ray Images (CXR)
- Laquita Noel - Deep Learning to Detect Drug-Induced Kidney Injury

8:30PM   **Adjourn**

Monday April 4, 2022

Venue: Little Rock Marriott, 3 Statehouse Plaza, Little Rock, AR 72201

7:00AM   **Registration & Continental Breakfast** *in Riverview Room*
Students are encouraged to set up their posters at this time in the Riverview Foyer

8:00AM   **Welcome & Introductory Remarks** *in Arkansas Ballroom*
- Jennifer Fowler, Principal Investigator & Project Director, Arkansas National Science Foundation EPSCoR
- Dr. Xiuzhen Huang, A-State Founding Director of the Center for No-Boundary Thinking, Professor of Computer Science
- Video Message from Governor Asa Hutchinson
- Dr. Tucker Patterson, Food & Drug Administration National Center for Toxicological Research (FDA NCTR)

8:45AM   **The K-12 to Postsecondary Continuum: Ensuring a Highly Skilled Future Workforce** *in Arkansas Ballroom*
Dr. Tina Moore, ADE

9:00AM   **Opening Keynote Talk** *in Arkansas Ballroom*
Arkansas Secretary of Commerce Mike Preston

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9:30AM **Technical Session: AI for drug development – from Preclinical Studies to RWD**
by the Food & Drug Administration National Center for Toxicological Research (FDA NCTR)
Session Chair: Dr. Joshua Xu
in Arkansas Ballroom

- Dr. Joshua Xu, PathologAI: An AI framework for preclinical digital pathology
- Dr. Xi Chen, ToxGAN: An AI Alternative as in-silico animal studies
- Dr. Yue Wu, Mining drug labeling documents for safety evaluation
- Dr. Leihong Wu, Explainable AI for regulatory science
- Dr. Dong Wang, Harness the power of AI for real-world data analysis

11:00AM Short Break

11:15AM **Challenges and Opportunities for Advancing Biomedical Artificial Intelligence in NBT** *in Arkansas Ballroom*
Keynote Presentation by Dr. May Wang

12:00PM Lunch Served *in Riverview Room*

12:30PM **Identifying Viruses from Host Genomes and Predicting Virus-host Interactions and Disease Severity** *in Riverview Room*
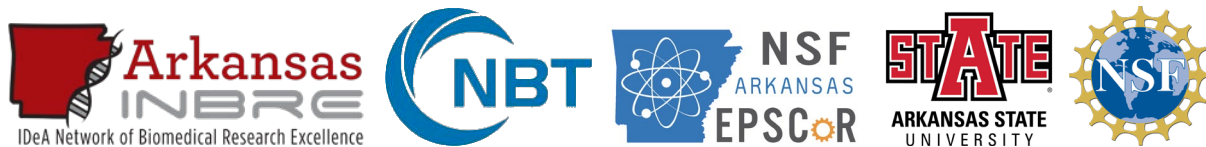Keynote Presentation by Dr. Zhongming Zhao

1:00PM **Applications of AI & No-Boundary Thinking** *in Arkansas Ballroom*
- Dr. Jiaqi Gong, AI-Empowered Geographical Research in Rural Social Determinants for Combating Opioids
- Dr. Hana Khamfroush, AI at the Edge for Smart Decision Making in Smart Cities
- Dr. Forest Agostinelli, Explainable Artificial Intelligence & the Rubik's Cube
- Dr. Shubhra Kanti Karmaker, Data Science for All
- Dr. Justin Zhan, No Boundary Thinking & AI-Driven Big Data Analytics

2:30PM **AI in Statistics & Data Science** *in Arkansas Ballroom*
Session Chair: Dr. Hongmei Jiang, Northwestern University
- Dr. Lei Liu, HIMA2: High-dimensional Mediation Analysis and its application in epigenome-wide DNA methylation data

- Dr. Bradly C. Stadie, Making Sense of the Past with Hindsight Divergence Minimization
- Dr. Yifan Peng, Prior Knowledge Enhances Radiology Report Generation

3:30PM **Networking Break & Refreshments** *in Riverview Room*
Attendees are encouraged to view the student posters during this time and exchange contact information on the event Mural.

4:00PM **Video Presentations & Lightning Talks** *in Arkansas Ballroom*
- Dr. Fred Prior, Explainable AI for Cancer Imaging
- Dr. Jichun Li, Deep Learning for Option Pricing
- Jennifer Fowler, Undergraduate Data Science & AI Education

5:00PM **Closing Remarks** *in Riverview Room*

5:30PM **Adjourn**
Posters should be removed at this time. Attendees staying overnight are encouraged to review the event program for restaurant suggestions.

Event Mural Board

Attendees are invited to participate in the event's Mural. You will not be required to create an account and can engage in the networking space to share contact information, the collaboration space to find potential collaborators, and the evaluation space to give feedback to the event organizers. The Mural has tips and resources for the meeting, and attendees can share resources there as well. Students are encouraged to share their poster abstracts and connect with faculty through Mural. The Mural will be exported and shared with attendees after the meeting. **Mural Link: tinyurl.com/NBTmural**

Event Host Contact Information

The event hosts are Jennifer Fowler (mobile 501-414-2428, JFowler@ArkansasEDC.com) and Dr. Xiuzhen Huang (xhuang@astate.edu).