

# TICKBASE FIRST ANNUAL MEETING MARCH 23-24, 2021



DAY 1 - TUESDAY, MARCH 23

**8:00AM** Welcome and meeting kick-off Dr. Marshall Ma, University of Idaho

Team Member Objective Presentations on Research Progress and Future Plans (Dr. Barrie Robison, moderator)

## **Cyberinfrastructure and Data Science Framework**

**8:20AM** TickBase Data Portal Architecture Dr. Luke Sheneman, University of Idaho

**8:35AM** Reproducible Workflows in Earth and Environmental Sciences Dr. Marshall Ma, University of Idaho

**8:50AM** Teaching Data Literacy and Ecological Principles Using an RPG Adventure Style Video Game  
Dr. Barrie Robison, University of Idaho

**9:05AM** Data Analytics Methods Dr. Frank Gao, University of Idaho

## **Biology/Entomology/Tick-Borne Disease Dynamics**

**9:20AM** Changing Tick-borne Disease and Tick Vector Dynamics in the Western U.S. Overview  
Dr. Mike Teglas, University of Nevada, Reno

**9:35AM** Tick Population Genomics: Updates on Sample Collection and Plans for Data Analysis  
Dr. Monika Gulia-Nuss, University of Nevada, Reno

**9:50AM** Plans for the Detection of Tick-borne Pathogens Dr. Claudia Rückert, University of Nevada, Reno

**10:05AM BREAK - 15 MINUTES**

**10:20AM** “Mapping Tick Dynamics and Tick Bite Risk Using Data-driven Approaches and Volunteered Observations” Dr. Irene Garcia Marti, Royal Netherlands Meteorological Institute (Dr. Marshall Ma, intro)

**11:00AM** Post-talk Q&A

Team Member Objective Presentations on Research Progress and Future Plans (Dr. Barrie Robison, moderator)

## **Biology/Entomology/Tick-Borne Disease Dynamics**

**11:10AM** Modeling the Sensitivity of Blacklegged Ticks (*Ixodes scapularis*) to Temperature and Land Cover in the Northeastern United States Dr. Jonathan Winter, Dartmouth College

## **Geography/Socioeconomics/Spatial Temporal Analysis**

**11:25AM** Analyzing Google-trend Data on Tick-borne Diseases Dr. Felix Liao, University of Idaho

**11:40AM** Application of STWR to Modeling the Urban Heat Island Effect in Phoenix, AZ Dr. Chao Fan, University of Idaho

**11:55AM LUNCH BREAK - 45 MINUTES**

All times are listed in US Pacific Time



**12:40PM** “Catalyzing Multidisciplinary Intersection Between Human and Environment: A Geoweaver-based Approach” Dr. Ziheng Sun, George Mason University Center for Spatial Information Science and Systems (Dr. Marshall Ma, intro)

**1:20PM** Post-talk Q&A

Team Member Objective Presentations on Research Progress and Future Plans (Dr. Barrie Robison, moderator)

**Geography/Socioeconomics/Spatial Temporal Analysis**

**1:30PM** The Role of the Socio-economic Factors in Urban Green Space Variation in a Desert City  
PhD student Zhe Wang, University of Idaho

**1:45PM** Provenance Documentation to Enable Trustworthy and Explainable AI in Data Science  
PhD student Amruta Kale, University of Idaho

**2:00PM** Integrating a Systems Based Model with Lab Experiments, Field Observations, and Big Data  
Dr. Dorothy Wallace, Dartmouth College

**2:15PM** Landscape Fragmentation and Lyme Disease Dr. Xun Shi, Dartmouth College

**2:30PM** Overview of Day 2 activities Dr. Marshall Ma

**8:00AM** Welcome/progress review & strategic plan Dr. Marshall Ma & Kimberly Bernard (Dr. Barrie Robison, moderator)

**Guiding questions for discussion groups:**

Are the anticipated annual outcomes clearly planned?

Elaborating with the outcome plans, specify 1-2 research questions each year to facilitate collaboration on research and publication

Actions to take for the rest of year 1 and the next year

**8:15AM** Discussion groups (move from main meeting to individual group meetings)

**Objective 1: FAIR Data of Interacting Factors in Tick-borne Disease Dynamics**

Dr. Luke Sheneman (leader)  
Dr. Tin Nguyen  
Dr. Claudia Rueckert  
Dr. Mike Teglas

**Objective 3: Data Analytics and Machine Learning Methods**

Dr. Frank Gao (leader)  
Dr. Tin Nguyen  
Dr. Xun Shi

**Objective 2: Reproducible Workflows and Provenance in Tick-borne Disease Research**

Dr. Marshall Ma (leader)  
Hasan Jamil  
Amruta Kale

**Objective 5: Spatiotemporal Analysis of Climate Change Impacts on Lyme Disease and Tick Dynamics in New Hampshire**

Dr. Xun Shi (leader)  
Dr. Chao Fan  
Dr. Frank Gao  
Dr. Marshall Ma  
Dr. Andrew Nuss  
Dr. Dorothy Wallace  
Dr. Jonathan Winter

**9:15AM BREAK - 15 MINUTES**

**9:30AM** Discussion groups

**Objective 4: Changing Tick-borne Disease and Tick Vector Dynamics in the Western US**

Dr. Michael Teglas (leader)  
Dr. Fred Harris  
Dr. Marshall Ma  
Dr. Andrew Nuss  
Dr. Barrie Robison  
Dr. Claudia Rueckert  
Dr. Dorothy Wallace  
Dr. Jonathan Winter

**Objective 6: Socio-economic Patterns of Tick-borne Disease Pertinent to Prediction and Public Health Hazards Surveillance**

Dr. Haifeng (Felix) Liao (leader)  
Dr. Chao Fan  
Dr. Frank Gao  
Dr. Andrew Nuss  
Dr. Mike Teglas

**Objective 7: Games and Interactive Demos for Outreach and Education**

Dr. Barrie Robison (leader)  
Dr. Fred Harris  
Dr. Luke Sheneman  
Dr. Xun Shi

## 10:30AM BREAK AND LEADER OBJECTIVE PRESENTATION PREP - 15 MINUTES

**Objective Leader Presentations and Discussion** Dr. Marshall Ma, moderator

**10:45AM Objective 1** Dr. Luke Sheneman, University of Idaho

**10:50AM Objective 2** Dr. Marshall Ma, University of Idaho

**10:55AM Objective 3** Dr. Frank Gao, University of Idaho

**11:00AM Objective 4** Dr. Michael Teglas, University of Nevada, Reno

**11:05AM Objective 5** Dr. Xun Shi, Dartmouth College

**11:10AM Objective 6** Dr. Haifeng (Felix) Liao, University of Idaho

**11:15AM Objective 7** Dr. Barrie Robison, University of Idaho

## 11:30AM LUNCH BREAK - 30 MINUTES

**Reporting and Evaluation** Dr. Barrie Robison, moderator

**12:00PM Reporting and Evaluation Overview** Kimberly Bernard, TickBase External Evaluator

**12:05PM T2-DOP reporting demo** Dr. Caroline Szymeczek, Integrated Learning Innovations

**12:45PM Experiences with T-2 reporting and evaluations** Dr. Marty Ytreberg, University of Idaho

**1:05PM Internal reporting demo, reporting timeline, and budget deadlines** Lisha Abendroth & Mollyann Jones, University of Idaho

**April 1** Participants receive email reminder from T2-DOP on reporting deadline

**April 13** Participants receive final email reminder from T2-DOP that the deadline to complete research outcomes is April 15 at 9AM

**April 15** 9AM deadline to complete research outcomes entries in T2-DOP AND the internal TickBase reporting form

**1:25PM Evaluation expectations and final Q&A about the reporting process** Kimberly Bernard, TickBase External Evaluator

## 1:40PM BREAK - 15 MINUTES

**Panel Discussion** Dr. Fred Harris, moderator

**1:55PM “What I have learned in the past two days and what I am excited about for the next year?”**  
Dr. Barrie Robison, Dr. Marshall Ma, Dr. Michael Teglas, Dr. Xun Shi, Dr. Tin Nguyen,  
Dr. Jonathan Winter

**3:00PM Meeting wrap up** Dr. Marshall Ma