



Midwest Mathematical Biology Conference 2024

University of Wisconsin, La Crosse
Student Union 3310

Wednesday May 22, 2024

- 9:00 am Coffee, Tea, and Continental Breakfast
Welcome Remarks
- 9:30 am *Uniting Movement Data and Epidemiological Models to Predict Pathogen Spread and Persistence Across Landscapes*
Mark Q. Wilber (presenting), Juan S. Vargas Soto, Justin Kosiewska, Dan Grove, Dailee Metts, Lisa I. Muller
School of Natural Resources, University of Tennessee Institute of Agriculture
- 10:30 Break and Discussion
- Session I
- 10:40 am *Clustering Using Self Organizing Maps in Biology*
Olcay Akman (Illinois State University)
- 11:00 am *Joint Species Distribution Modeling Shows Abrupt Plant Recovery After Water Quality Improvements.*
Danelle Larson (US. Geological Survey)
- 11:20 am *Structural Instability and Linear Allocation Control in Generalized Models of Substance Use Disorder*
Leigh Pearcy (University of Pittsburg)
- 11:40 am Break and Discussion
- 11:50 am *Developing and Applying Multispecies Occupancy Models to Invasive Carp Species in the Illinois River*
Richard Erickson (U.S. Geological Survey)
- 12:10 pm *A Mathematical Model of the Impacts of Climate Change on the Winter Tick Epizootic in Moose*
David Elzinga (University of Wisconsin – La Crosse)

12:30 pm	Box Sandwich and Salad Lunch (provided)
1:30 pm	<i>Ecological Communities in Transition: Testing Theory in Global Change and Restoration Contexts</i> Lauren Shoemaker (Botany Department, University of Wyoming)
2:30 pm	Break and Discussion
	<u>Session II</u>
2:40 pm	<i>Using Computer Vision to Identify Food Deliveries in Videos of Flammulated Owl Activity at Nest Sites</i> Charles Labuzzetta (US. Geological Survey)
3:00 pm	<i>Using Integral Projection Models to Understand How Amphibian Defense Strategies Against a Virulent Fungus Vary Among Host Life Stages</i> Jordan Pellett (University of Tennessee, Knoxville)
3:20 pm	<i>Spatial Evaluation of Invasive Silver Carp and Management in the Tennessee Cumberland River System</i> Alexandria Lacy (Tennessee Cooperative Fishery Research Unit, Tennessee Technological University)
3:40 pm	Break, Snack, and Discussion
3:50 pm	<i>Stimulation of the Enzyme Phosphoglycerate Kinase with a Competitive Inhibitor</i> Colleen Mitchell (University of Iowa)
4:10 pm	<i>A Patch Driven Food Model</i> Urvashi Verma (Iowa State University)
4:30 pm	Discussion of evening options

Evening Options

- Mississippi Queen – Pizza Cruise (w/unlimited beverage) 5:30-7pm (\$23.95)
- Recommended Restaurants in Downtown La Crosse
 - Buzzard Billy's – Cajun (\$\$)
 - 4 Sisters Wine Bar and Tapas (\$\$)
 - The Crow – pub grub burgers (\$\$)
 - Dublin Square – Irish (\$\$)
 - Big Al's Pizza (\$\$)
 - Pickerman's Deli (\$)
 - Waterfront – seafood (\$\$\$)
 - SAGRA Food and Wine – Trattoria (\$\$\$)
- Breweries and Distilleries
 - Turtle Stack Brewery
 - La Crosse Distillery and Restaurant
 - 608 Brewing (about 0.5 miles north of downtown)

- Shops and Places to Explore
 - Pearl Street Ice Cream
 - Riverside Park and International Friendship Gardens
 - Leithold Music
- Trivia Night – 7-9pm @ Root Note (115 4th St S)

Thursday May 23, 2024

9:00 am	Freshwater Collaborative Sponsored: Coffee, Tea, and Continental Breakfast
9:30 am	<i>Crunching Numbers for Conservation: Lessons from the Grouper Moon Project and Fisheries Assessment Work</i> Lynn Waterhouse (Department of Fisheries, Wildlife and Conservation Biology, University of Minnesota)
10:30 am	Break and Discussion <p style="text-align: right;"><u>Session III</u></p>
10:40 am	<i>Comparing Population Control Strategies for Invasive Bigheaded Carp Species (Hypophthalmichthys spp.) in the Upper Mississippi River with the SEICarP Model</i> Kassidy Frame (University of Wisconsin – La Crosse)
11:00 am	<i>The Mathematics of Heterogeneous Populations and Spread of COVID-19</i> Artem Novozhilov (North Dakota State University)
11:20 am	<i>Fish Age Assessment of Otoliths Using Deep Learning and Image Analysis Techniques</i> J. Nolan Steiner (U.S. Geological Survey)
11:40 am	<i>Non-local Variable Carrying Capacity Model for Aphid population Dynamics</i> Aniket Banerjee (Iowa State University)
12:00 pm	Final remarks and end of conference

Recommended Hotels:

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| <ul style="list-style-type: none"> • Hampton Inn & Suites • Radisson Hotel | <ul style="list-style-type: none"> • Holiday Inn & Suites • GrandStay Hotel & Suites |
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Parking Information:

Parking is available adjacent to the Student Union. You are authorized to park in Lot C-2, Lot C-12, or on

Levels 1-3 of the Parking Ramp. You will need to register your vehicle before or when you arrive to campus by following the directions below:

1. Click on the Parking Link (<https://www.offstreet.io/location/SSQOJRV2>)
2. Enter the license plate (change state, if not WI)
3. Click Park
4. Click Done

Wi-Fi Access: UWL-Guest