

Southeast Regional SICB Meeting 2024

James Madison University, Hall of Presidents

Saturday, November 16, 2024



Sponsored by: JMU Department of Biology; JMU College of Sciences and Mathematics;
SICB Divisions of Comparative Biomechanics & Vertebrate Morphology

Organizers: Emily Naylor and Roshna Wunderlich (540-421-4835)

Meeting website: <https://www.jmu.edu/biology/scbimeeting.shtml>

[Parking info and walking directions](#) (pages 5-6)

Friday

6:00PM

Pre-conference social at Hotel Madison Lounge ([Quills](#))

710 S Main St, Ste 149; PARKING: Mason Street Parking Deck (metered)

Saturday (Hall of Presidents)

8:15-9:00 AM

Breakfast/Check-in

9:00-9:50 AM

Morning Talks: Session 1

Emily Naylor, Roshna Wunderlich (JMU): *Welcome*

Susan Cantonwine (UNC Chapel Hill): *Kinematics of red-tailed hawk flight through symmetric and asymmetric upward gusts*

Laura Mendez (UNC Chapel Hill): *Characteristics of aquatic takeoffs between bird species*

Eriberto Osorio (JMU): *Experimentally testing a potential mechanism of urban adaptation in a songbird*

Dana Moseley (JMU): *Reproductive success, nestling survival, and song variation across an urban gradient in the gray catbird (*Dumetella carolinensis*)*

Hodjat Pendar (Virginia Tech): *Maximum speed and efficiency in snake locomotion*

Joshua Pulliam (Virginia Tech): *Walking the tightrope: Is vertical gap crossing in snakes influenced by perch diameter?*

9:50-10:10 AM

Morning Break

10:10-10:55 AM

Morning Talks: Session 2

Joshua Gunn (JMU): *Determining the mechanism of female mimicry in red-sided garter snakes (*Thamnophis sirtalis parietalis*)*

Rocky Parker (JMU): *How to (un)make a sexy snake: sex steroid regulation of attractivity and pheromone production in garter snakes*

Madison Hales (Georgia Tech): *Characterizing interactions between forced sinusoidal gravitropism and circumnutation in rice roots*

Jordan Heydt (JMU): *Characterization of the microbial community of the James River rock pool ecosystem*

Rick Blob (Clemson, IOB Interim Editor-in-Chief): *Submitting to Integrative Organismal Biology*

10:45-11:00 AM **Short Break**

11:00-12:00 PM **Keynote**

Dr. Kelsey Reider (James Madison University): *Glacial flow and other stories*

12:00-1:30 PM **Lunch**

1:30-2:50 PM **Poster Session**

- 1) Tony Gelona (JMU): *Wild Andean camelids influence plant communities following glacial retreat*
- 2) Pranavamathi Kumaran (Georgia Tech): *How springtails survive collisions with raindrops*
- 3) Natalie Buford (JMU): *Splitting hairs or toe-tally different? Investigating intraspecific variation in day gecko morphology and ecology*
- 4) Amanda Kellerhals (Clemson): *Evaluation of depth perception in lizards*
- 5) Abigail Gibson (JMU): *Eurythermal and, cold and warm adapted zooplankton species: associations with genome size*
- 6) Sarah Beth Redmond (Radford): *Developing a methodology for assessing the gut integrity of Eisenia fetida*
- 7) Jaylan Garcia Martinez, Ally Turner (JMU): *Impact of dietary sodium benzoate on gut microbiome and behavior in mice: exploring the gut-brain axis over 9 months*
- 8) Walter Thompson (JMU): *Maternal positional behavior and energetics during infant carrying in Propithecus coquereli*
- 9) Owen McDonald, Brevin Bugausan (JMU): *Canopy connectivity at spider monkey crossing localities*
- 10) Trevor Brewington (Clemson): *Polydactyl precursors: insights for early tetrapod terrestrial locomotion from polydactyl alligators*
- 11) Sam Krauss (JMU): *Investigating the immunology of red-sided garter snakes (Thamnophis sirtalis parietalis): correlates of overt parasitism*
- 12) Jeff Anderson (Virginia Tech): *Do semi-arboreal snakes feed differently between arboreal vs. terrestrial environments?*
- 13) Morgan Jones (JMU): *Cross-species comparisons of skin lipid enzyme genes in garter snakes (Thamnophis spp.)*
- 14) Stella Venn (Rhodes College): *Neurocranial variation in canids: insights on artificial selection from geometric morphometrics*
- 15) Hannah Hass (JMU): *Effects of high salt stress on root growth characteristics of the Arabidopsis STP1 k/o plant*
- 16) Juliane Calvert, Anna Williams, Jackson Vickers (JMU): *Assessing whether the number of samples or sampling rate impact song frequency measurements in an immediate song flexibility experiment*
- 17) Erin Naman, Ethan Dray (JMU): *How vocally flexible are catbirds? Testing the timing of immediate flexibility in a vocal mimic, the gray catbird (Dumetella carolinensis)*
- 18) Anna Zheng (UNC Chapel Hill): *Royal tern plunge diving dynamics*
- 19) Radeen Dixon (Georgia Tech): *Habituation learning of single-celled Spirostomum Ambiguum*
- 20) Joshua Taylor (Virginia Tech): *Axial twist: a flying snake's secret weapon for jumping?*
- 21) *Integrative Organismal Biology Information Booth*

2:50-3:00 PM

Short Break

3:00-3:45 PM

Afternoon Talks: Session 3

Angelina Huang (Duke): *Sequential prey capture in cuttlefish*

Yohan Sequeira (Virginia Tech): *Self-righting behavior of benthic crabs in freefall*

David Munteanu (Clemson): *Kinematic evaluation of descent slowing behavior during falls in lizards*

Sunny Kumar (Georgia Tech): *Raindrops induce collective springtail jumping*

Saba Bitar (Georgia Tech): *Sea urchin decision making*

Aaron Hardgrave (East Tennessee State): *Ecomorphology's role in the limb skeleton of the polyphonic eastern newt*

3:45-4:10 PM

Afternoon Break

4:10-4:55 PM

Afternoon Talks: Session 4

Halley Wallace (Georgia Tech): *Mastering the Manu: How humans create large splashes*

Pranav Khandelwal (Virginia Tech): *The biomechanics of cicada wing coupling*

Sheila Patek (Duke): *Snapping shrimp biomechanics and acoustics in a thermally variable environment*

Tarik Burlingham (Duke): *Effects of short-term high-temperature exposure on snapping shrimp acoustics*

Ellery Lei (Duke): *Kinematics: a machine learning tracking analysis of snapping shrimp snaps at high temperatures*

Melody Young (Duke): *Snapping shrimp acoustics and kinematics across seasonal temperature fluctuations in their year-round habitats*

Emily Naylor, Roshna Wunderlich (JMU): *Closing remarks*

5:30PM

Post-conference social at [Capital Ale House](#)

41-A Court Square (Downtown Harrisonburg)

15-minute walk from Hotel Madison

PARKING: street parking around Court Square, Water Street Parking Deck, E Water St Lots (all free)

Conference Participants

Danielle Adams (Clemson)
Carly Anderson (JMU)
Jeff Anderson (Virginia Tech)
Ian Barry (JMU)
Andrea Berardi (JMU)
Gabriel Bermudez Calvo (Virginia Tech)
Saba Bitra (Georgia Tech)
Richard Blob (Clemson)
Trevor Brewington (Clemson)
Lee Brown (JMU)
Natalie Buford (JMU)
Brevin Bugausan (JMU)
Tarik Burlingham (Duke University)
Juliane Calvert (JMU)
Susan Cantonwine (UNC Chapel Hill)
Emily Cooper (UNC Chapel Hill)
Radeen Dixon (Georgia Tech)
Ethan Dray (JMU)
Eunis Duncan (JMU)
Amanda Eckhoff (JMU)
Jaylan Garcia Martinez (JMU)
Tony Gelona (JMU)
Abigail Gibson (JMU)
Joshua Gunn (JMU)
Madison Hales (Georgia Tech)
Kiersten Hannah (JMU)
Aaron Hardgrave (East Tennessee State University)
Hannah Hass (JMU)
Ty Hedrick (UNC Chapel Hill)
David Hembry (JMU)
Marta Hess (Clemson)
Jordan Heydt (JMU)
Angelina Huang (Duke University)
Sarah Hussein (JMU)
Hossam Ismail (Mercer University)
Brandon Jackson (Longwood University)
Morgan Jones (JMU)
Sandy Kawano (George Washington University)
Amanda Kellerhals (Clemson)
Pranav Khandelwal (Virginia Tech)

Sam Krauss (JMU)
Sunny Kumar (Georgia Tech)
Pranavamathi Kumaran (Georgia Tech)
Ellery Lei (Duke University)
Luke Lotsis (JMU)
Aspen Lovejoy (JMU)
Margaret Luck (JMU)
Rosario Marroquin-Flores (JMU)
Owen McDonald (JMU)
Laura Mendez (UNC Chapel Hill)
Dana Moseley (JMU)
David Munteanu (Clemson)
Erin Naman (JMU)
Emily Naylor (JMU)
Eriberto Osorio (JMU)
Rocky Parker (JMU)
Sheila Patek (Duke University)
Hodjat Pendar (Virginia Tech)
Theodora Po (Virginia Tech)
Joshua Pulliam (Virginia Tech)
Sarah Beth Redmond (Radford University)
Kelsey Reider (JMU)
Lauren Sarringhaus (JMU)
Jackson Savage (Duke University)
Yohan Sequeira (Virginia Tech)
Jacob Sobol (Virginia Tech)
Jake Socha (Virginia Tech)
Ryan Srivastava (JMU)
Helen St. John (JMU)
Janet Steven (Christopher Newport University)
Walter Thompson (JMU)
Ally Turner (JMU)
Bisi Velayudhan (JMU)
Stella Venn (Rhodes College)
Jackson Vickers (JMU)
Halley Wallace (Georgia Tech)
Anna Williams (JMU)
Roshna Wunderlich (JMU)
Melody Young (Duke University)
Anna Zheng (UNC Chapel Hill)

Parking and Walking Directions

General parking:

The MASON STREET PARKING DECK (attached to Hotel Madison) will be available for general parking at no cost on Saturday and Sunday. Guests should use the entrance on Mason Street and park in standard (unmarked) spaces (levels 3-5). *Note that specially marked spaces are enforced 7 days a week; guests are subject to parking citations if parked in Service Vehicle spaces, accessible spaces without proper placard, spaces designated for Hotel Madison Conferences or Staff, fire lanes or other prohibited areas. Timed spaces on campus are also enforced 24 hours a day, 7 days a week.*

For guests of Hotel Madison arriving on Friday, November 15: Parking in MASON STREET PARKING DECK is \$5 per day. Guests should use the entrance on Martin Luther King Jr. Way and park in Hotel Madison Guest spaces (level 1). *Guests may elect to move their vehicles to standard (unmarked) spaces on Saturday morning before the meeting begins to avoid additional parking fees; this will require exiting the garage and re-entering on Mason Street (see above).*

Walking from the Mason Street Parking Deck/Hotel Madison to venue (see map):

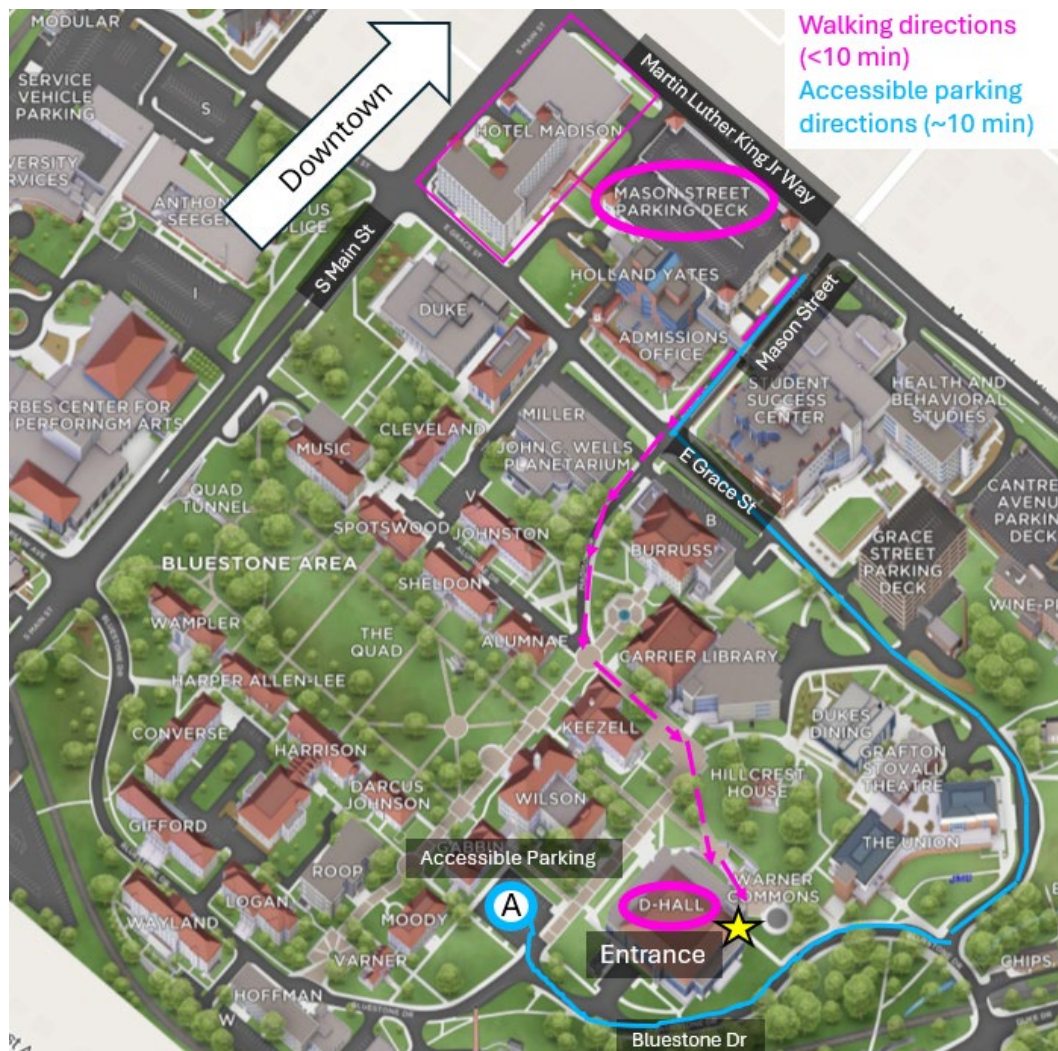
Exit the parking garage to Mason Street (*look for the stairwell/elevator area with purple signs for the 'SkyBridge'*). Proceed towards the Grace Street intersection; cross Grace Street and proceed past Burruss Hall (on left), then turn left at the fountain/ sundial, and proceed past the Carrier Library (renovation fencing) on your left. Down the hill to your right, you should see D-Hall, a large, windowed building with a clock tower. Enter at the bottom of the hill (clock tower entrance), then proceed up the stairs (or use the elevator on the right) to reach the Hall of Presidents.

Accessible parking:

LOT A will be available for accessible parking; guests must display a proper placard. *Note that specially marked spaces are enforced 7 days a week; guests are subject to parking citations if parked in Service Vehicle spaces, accessible spaces without placard, fire lanes or other prohibited areas. Timed spaces on campus are also enforced 24 hours a day, 7 days a week.*

Driving from the Mason Street Parking Deck/Hotel Madison to Lot A (see map):

Turn right out of the Mason Street exit and proceed towards the Grace Street intersection. Turn left onto Grace Street and proceed down the hill through the gate (lifted on weekends) to the stop sign. Turn right onto Bluestone Drive, continue past D-Hall (to your right) and to the Lot A entrance on your right. Use the sidewalk path to the east entrance of D-Hall and use the elevator (on the right) to reach the Hall of Presidents.



Full campus map: <https://www.jmuvcamp.com/jmu-interactive-campus-map>

Campus parking map: <https://www.jmu.edu/parking/ files/parkingmap.pdf>