

JANUARY 2023

NEWSLETTER



UNIVERSITY OF
South Carolina



CAROLINA
AUTISM & NEURODEVELOPMENT
CENTER



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January Events

Science Meeting & Social

- Tuesday January 10, 2023
- IMB Room 125
- Refreshments @ 8:30 am
- Talks @ 9 am

Community Working group

- January 17 @ 1:30 (virtual)

Save the
Date

SCAND Consortium Research Symposium

Friday, March 3rd, 2023 | 9am-5pm
Riverbanks Zoo & Garden

[RSVP here](#) by 2/24/23



Caitlin Hudac
CAN Steering Director
chudac@mailbox.sc.edu

Hi everyone,
What a fabulous Fall 2022 semester! I really enjoyed getting to know everyone -- their work, their ideas, as well as goals and aspirations. We had CAN 1st & 3rd Thursdays, as well as many successful events:

1. **Successful August CAN retreat**
2. **External speaker: Dr. Robins**
3. **Talks from 6 CAN members**
4. **Trainee-led "research speed dating" event**
5. **Festive holiday celebration (see page 5)**



Cheers,

Caitlin

We took some time to reflect on elements to improve for Spring 2023 - and the biggest piece was inclusion: We want to see and hear more from YOU! To accomplish this goal, we have a few upcoming changes. Really looking forward to spending more time together!

SPRING 2023

1 Timing of events

We are going to rotate WHEN we hold events - including time and day of the week.

2 External speakers

Our most well-attended events involved external speakers. So, more of that!

3

Executive committee

3rd Wed.

We are soliciting volunteers to be standing members each semester to join executive committee meetings. We aim to have representation from across USC and include junior, middle, and senior faculty -- as well as trainees!

Virtual meetings will be 3rd Wed each month at 12:30 pm. The commitment expectation would be for this 1 hour a month, though you are welcome and may choose to volunteer more time as events are planned. If interested, email Caitlin for more details and so she can send invites.

4 Streamlined grant reviews

We have created a centralized process to request and receive feedback on grant applications! Read more about it on Page 10.



*Spring 2023 schedule:
next page!*

Reminder for SCAND Research Symposium on March 3:

Abstracts for will be due 2/1/23 to be considered for awards/talks. More details can be found on the new website:

<https://www.scandconsortium.org>



Spring 2023 Events

**January
10**

Science Talks: Emotion Regulation

Join us at the IMB to learn about emotion regulation with Dr. Caitlin Hudac & Dr. Sarah Edmunds.

IMB Conference Room
Coffee Social: 8:30am

• Science Talks: 9-10am



**February
08**

Sips & Science: Quantifying Behavior

In an "open mic" framework, we invite researchers to share their thoughts on how their team quantifies behaviors (animal or human) in unique ways.

Hickory Tavern - Woodhill (141 Pelham Drive)
Talks @ 3-4:30 pm Social @ 4:30 pm +



**March
03**

SCAND Research Symposium

Join CAN for this all-day event with researchers across South Carolina. There will be scientific talks, updates, and poster presentations.

Riverbanks Zoo & Garden
Symposium: 9am-5pm. • Cocktail Hour: 5-6pm



**March
16-17**

External Speaker Series

Joining us from Seattle Children's & University of Washington, Dr. Sara Jane Webb will be giving a talk at the IMB conference on Social and Emotional Brain (3/17). She will be available for CAN small group meetings and activities on 3/16.



**April
04**

External Speaker Series

Joining us from Clemson University Department of Genetics and Biochemistry, Dr. Trudy Mackay & Dr. Robert Anholt will present their work exploring the genetic basis of variation.

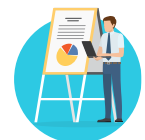


Room TBD • 3:30pm Talks

**April
TBD**

Research Roundup

Our annual research roundup will help us celebrate the end of the semester by sharing CAN research accomplishments (late April / early May). All CAN research labs are invited to sign up.



**April
TBD**

Mock Grant Review

The CAN grant committee will select one proposal to receive a full mock grant review by CAN faculty (late April / early May). All CAN members (students, faculty, staff) are welcome to attend!





CAROLINA
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JANUARY SCIENCE MEETING

Topic: Emotion Regulation

Now offering a **hybrid** option! Meet with us virtually on **Zoom**.

Coffee, tea, and light refreshments will be served!

Tuesday, 1/10/23

8:30 am - Social

9 am - Talks begin

IMB Room 125

1800 Gervais St.



**Dr. Sarah
Edmunds**

Emotion Regulation in
Autism



**Dr. Caitlin
Hudac**

New methods for understanding
the brain basis of moment-to-
moment emotion regulation

2022



**We wish you happy holidays and
the merriest of new years!**



**CAROLINA
AUTISM & NEURODEVELOPMENT
CENTER**

CAN Holiday Party Highlights

Thank you to all who attended the CAN holiday party, and a special thanks to Jeff and Caroline Twiss for hosting!



FACULTY SPOTLIGHT



Dr. Sarah Edmunds

Assistant Professor

Dept. of Psychology

College of Arts and Sciences

[Faculty Page](#) | [Lab Website](#)

Dr. Edmunds studies neurodiversity-informed interventions that address functional impairments associated with autism spectrum disorder (ASD), such as in social communication, flexibility, emotion regulation, and anxiety. She aims to investigate how to best implement, tailor, and increase accessibility for evidence-based interventions for ASD within early intervention, school, and mental healthcare systems.

Primary Research Goals

Make Naturalistic Developmental Behavioral Interventions (NDBIs) accessible

Dr. Edmunds aims to make NDBIs accessible to young autistic children and their families, within systems that are free and local. Right now, the system I work in is the early intervention system for children birth to three with developmental delays, funded by the IDEA Part C law.

Use NDBI strategies to improve emotion regulation in autism

NDBI strategies improve social communication. However, strategies within the NDBI umbrella may also improve emotion regulation (e.g., meltdowns), which are a very common parent concern for their autistic children.

Understand emotion regulation in autism

Dr. Edmunds want to define and intervene on the etiology of “meltdowns” in autism. For what children or in what circumstances are meltdowns due to differences in emotion regulation, language/communication, or sensory differences? What do autistic people think? Are there differences in physiology, and are their differences in which coping strategies autistic children and their parents can use, compared to typically developing children?

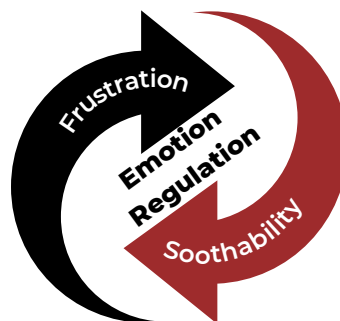


Current Projects

- Preparing to train South Carolina early intervention (EI) providers in an NDBI called Reciprocal Imitation Training (RIT)
- Studying emotion regulation processes in autistic toddlers
- Highlighting the heterogeneity in Part C EI system infrastructure and accessibility across all 50 states
- Leading an implementation science aim within a multiple, multisite R01

Future Projects

Ensure Part C providers feel capable of providing emotion regulation strategies to parents of autistic toddlers or toddler with social communication delays



Fun Facts

- Dr. Edmunds presented a flash talk at NIH headquarters on Halloween
- She has lived in every "corner" of the country except the southwest!
- She has color-grapheme synesthesia, which makes it unusually easy to remember room numbers, times, and dates.



STUDENT SPOTLIGHT

Kynslea Philcox

Major: Psychology and Dance

Year: Senior undergraduate student

Project: Senior honors thesis

Thesis Advisor: Dr. Sarah Edmunds



Kynslea Philcox, a senior undergraduate student majoring in psychology and dance, is studying the relationship between Naturalistic Developmental Behavioral Interventions (NBDIs) and social behaviors in children with autism for her senior honors thesis. In the future, she aims to work with children with autism, continue to pursue dance, and attend graduate school.

Research Question

Can a dance program augmented with NBDI support children with autism within a dance classroom setting?

Methods

Study Design: Mixed methods, single-case experiment assessing descriptive data

Measuring:

- Social engagement in class
 - Recorded all classes and coding social engagement, levels of play, and imitation
- Social behavior outside of class
 - Measured by parent self-report pre- and post-test
- Social validity
 - Parent focus group mid-intervention and individual interview post-intervention to assess if parent satisfaction, thoughts, etc.

Why is this research important?

By better understanding optimal teaching strategies for children with autism, dance teachers may gain tools to cater teaching to autistic students. As most 'adapted' dance classes use generalized strategies for children with a diverse array of disabilities, implementing teaching strategies for autism specifically may foster more effective student growth.

Want to learn more?

Interested in learning more about Kynslea's research? Watch her defend her thesis in mid-April!

Thank you to Kynslea for agreeing to be featured! Do you want to nominate a student for us to spotlight? Email us at weaverae@mailbox.sc.edu.



Match the pet with the member!

Pets



See answers pg. 13!



Daphne #1



Moose



Bailey



Smiles



Melvin & Felton



Bear



Daphne #2



Polly

Members



Rob



Alexandra



Elizabeth



Jeff



Dan



Audrey



Liz



Ana

CAN MEMBER SHOUT-OUTS

Celebrate our members' recent publications!

[Google Scholar Link](#)

Dr. Vignesh Narayanan published a paper (Dynamic Function Learning through Control of Ensemble Systems) in the AAAI 2023 workshop that provides a novel approach for continuous-time function learning algorithms. Read about it [here](#).

Dr. Sarah Tryon and her colleagues (including Dr. David Mott) published a paper (Differential regulation of prelimbic and thalamic transmission to the basolateral amygdala by acetylcholine receptors) in the Journal for Neuroscience. Using mouse brain slices their paper demonstrates that acetylcholine (a chemical "messenger") regulates signals to a part of the amygdala from cortex and thalamus, specifically. Read the paper [here](#).

Dr. Caitlin Hudac and her lab published a paper (Dynamic cognitive inhibition in the context of frustration: Increasing racial representation of adolescent athletes using mobile community-engaged EEG methods) in Frontiers in Neurology. This paper is part of a special issue on how we can advance the representation of minoritized groups in brain injury research. Her team is really proud of their scientific findings (*frustration reduces brain correlates of cognition*) and their methods guide on EEG data collection with coarse and curly hair (screenshots on this page). Read the paper [here](#).

LOOK!

Guides from Dr. Hudac's newest paper



Interested in sharing a new paper? Would you like to showcase a student? Let us know!

Grants

Let us know when you submit a grant or receive an award! Ideas for resources or grant-related workshops? Let Caitlin know!

CAN Grant review

New system

GRANT AIMS REVIEW



Interested in having your grant aims reviewed by other CAN researchers? We have a new centralized process to facilitate scheduling a grant review.



Complete survey



CAN will find reviewers



Review your feedback

Redcap survey:

<https://redcap.healthsciencessc.org/surveys/?s=N93FYKPAF7MXFNJN>

Let us know if you want to be a reviewer!



New opportunity

MOCK GRANT REVIEW

Senior CAN members will review, score, and discuss an NSF or NIH application.

This is a great opportunity to learn about the grant review process and support your CAN colleagues!

- **Who:** Open to the CAN research community, including trainees and faculty.
- **What:** One grant will be selected for the mock review based upon funding sponsor/ mechanism and reviewer availability. Early career scientists will be prioritized. Grants that are not selected for full panel review will still have their aims reviewed by standing grant review committee members.
- **When:** This will be scheduled around reviewer and applicant schedules/needs - targeted for end of April / early May 2023.

CAN IN THE COMMUNITY

CAN has a new Twitter account!



Follow us
@canresearchsc



Interested in tabling?
Contact Audrey or just
stop by to say hello!



UPCOMING COMMUNITY EVENTS

South Carolina State Museum (SCSM) Accessibility Mornings

- Every second Saturday!
- Jan. 14th, Feb. 11th
- 9-11am

EdVenture Sensory Nights

- Feb 18th
- 5:30-7:30pm

SC Philharmonic Sensory Friendly Concert

- Experience the SC Philharmonic's first
- sensory-friendly concert!
- Feb. 19th, 3pm

What should I expect when tabling?

When tabling, you will interact with families by informing them about CAN, directing parents to relevant studies, encouraging registry sign-up, and meeting lots of children!

RECRUITING STUDIES



Autism and Family Lab

Dr. Rob Hock is recruiting for his randomized controlled trial of Autism Parent Navigators, a prevention program for co-caregivers that targets parent mental health, parenting quality, ASD service engagement, child challenging behaviors, and child adaptive functioning. Participation eligibility includes a child diagnosed with ASD within the last 12 months, the child is between 18-mos and 8 yrs, and parenting responsibilities are shared by another adult who lives in the same home

Contact: Hannah Behr, Research Coordinator
(803) 386-9451 | hbehr@email.sc.edu

Family Experiences Lab

Dr. Jessie Klusek is recruiting mothers between the ages of 35 and 75 with a child with autism. The focus of the study is on the experiences of mothers of children with autism, and in identifying how language and cognitive features may be linked with normal variation in the FMR1 gene. Participation would involve completing some questionnaires, interviews, and language and cognitive tasks. Participation is in-person or virtual, takes 3-4 hours, and families will be compensated \$80.

Contact: (803) 576-7359
scfamilystudy@gmail.com

Early Social Development (ESD) Lab

Dr. Jessie Bradshaw is recruiting babies between the ages of 0-36 months to participate in four studies. Participation includes a variety of developmental assessments and participants can receive between \$120 and \$200, dependent upon the study.

Contact: (803) 993 - 8356 | esdilab@mailbox.sc.edu

Developmental Dynamics Lab

Dr. Liz Will is recruiting infants with Down syndrome 12-months and younger to participate in a longitudinal study on early development and communication. Assessments, all of which involved play-based activities, will take 3-4 hours, once every 3-6 months, for ~2 years. Families will receive between \$40-\$200 for participation.

Contact: willea@mailbox.sc.edu

Neurodevelopmental Disorders (NDD) Lab

Dr. Jane Roberts is recruiting infants 12 months or younger for a longitudinal study who have fragile x syndrome, have the fragile x premutation, and who are typically developing. Participation involves assessments (lasting 2-4 hours each) at 6, 9, 12, and 24 months either at the home or at the University of South Carolina, summary reports of your child's development by infant development experts, and compensation for participation (up to \$400 total).

Contact: (803) 777-5676 | uscnddlab@sc.edu

Don't see your study?

If you would like CAN to recruit for your study, fill out [this brief form](#) to provide information about your sample.

CALL TO ACTION

We want everyone within our CAN community to feel involved!

Ways you can get involved in CAN

Community Outreach & Recruitment

Join us at one of our tabling events. Or propose an idea for engagement with a particular community -- for instance, we are looking for new ways to connect with rural communities. Do you have an idea that could help?

Workgroups

Trainee Committee

1-2 per semester
Peer grant review

3rd Tuesdays
Community/outreach

Executive Committee

Volunteer for the virtual Executive Committee meetings. These meetings are 3rd Wednesday @ 12:30 pm for the Spring 2023 semester.

Website & Newsletters

Spotlights: Submit a picture of yourself and a blurb about your research to be featured on the CAN website and newsletter!

Recent publications: Tell us about your newest publication. Bonus points for working with us to develop an infographic describing your findings.

Ask a question: Do you have an autism or neurodevelopment question "itching" at the back of your mind? Ask a question in an upcoming newsletter and we'll solicit commentary from the CAN community.

Shout-outs: Proud of your trainee or mentor? Tell us!

Send all submissions and inquiries to [Audrey](#).

CAN Valentines!



More details about the SCAND Research Symposium

MARK YOUR CALENDARS!

2023 SCAND Symposium

March 3, 2023
Riverbanks Zoo & Garden
Columbia, SC
Starting at 9 am

SCAND
South Carolina Autism & Neurodevelopmental Disorders Consortium

Talks
Discussions
Community
Posters

Poster submissions considered for awards/talks due by 2/1/23

RSVP by 2/24/23!
<https://redcap.healthsciencesc.org/surveys/?s=F77P9WCRH4J7PF3A>

Answers to Pets:

1. Daphne #1 - Dan
2. Moose - Audrey
3. Bailey - Ana
4. Smiles - Elizabeth
5. Melvin & Felton - Jeff
6. Bear - Liz
7. Daphne #2 - Alexandra
8. Polly - Rob