

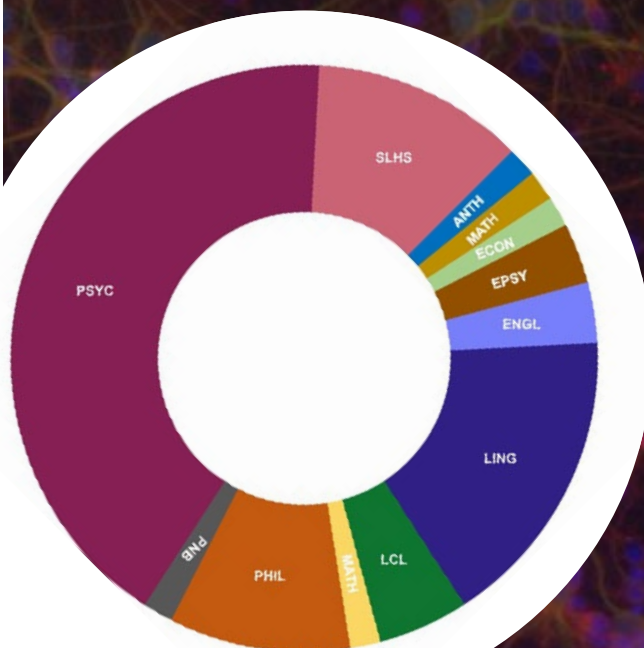


2022 - 2023

# IBACS BRAIN DIGEST

## IN THIS ISSUE:

- The History of the UConn CogSci Program: Past & Present Directors
- Undergraduate Courses & the Graduate Certificate
- Study Abroad Travel Award Recipient Spotlight
- CogSci Research: Undergraduate Research Spotlight
- Alumni Spotlight



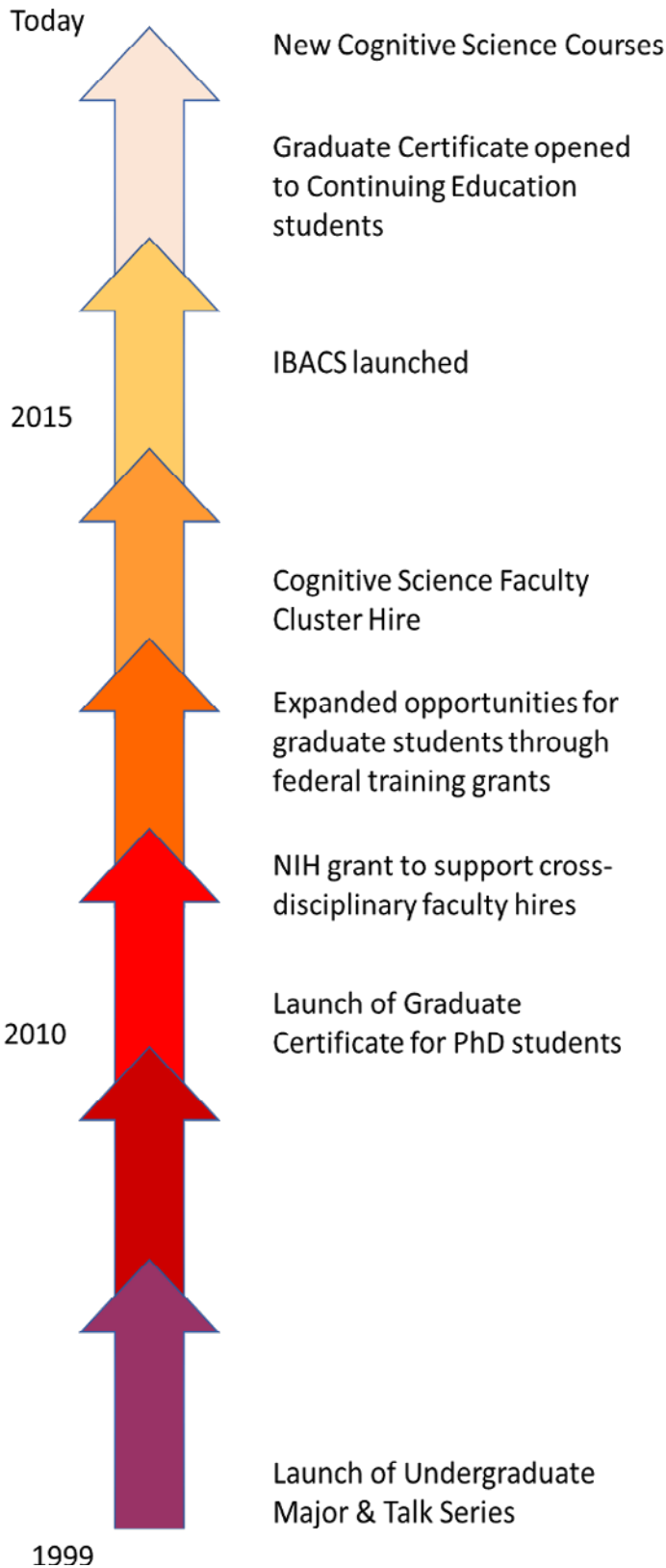
## UConn COGNITIVE SCIENCE PROGRAM

As UConn's Cognitive Science (CogSci) program prepares to celebrate our 25th anniversary, we are delighted to highlight our history and look ahead to our future. We began as a grassroots effort led by a devoted core of UConn faculty, with the vision that it would become a hub for Cognitive Science education at UConn. These founding members sought to fuse the diverse approaches and perspectives from the fields of psychology, linguistics, philosophy, neuroscience, anthropology, computer science, and speech and hearing sciences.

Today, after two decades of tremendous growth, we now comprise more than 50 faculty members from over a dozen departments. Our thriving community of cognitive sciences faculty affiliates lead internationally renowned research programs in cognitive science, and we teach and mentor CogSci students in classroom, laboratory, and fieldwork settings. Our CogSci faculty affiliates have been instrumental in founding the Institute for the Brain and Cognitive Sciences (IBACS), the Brain Imaging Research Center, and multiple federally funded training grants in the area of brain and cognitive sciences.

As a program we provide interdisciplinary, high-quality training to undergraduate and graduate students in [▶](#)

# PROGRAM MILESTONES



► the science of the human mind. Starting initially as an undergraduate program (including BA, BS, and a minor), our program now also supports a graduate certificate program for doctoral and continuing education students. We prepare our students with theoretical and experimental foundations of cognitive science, along with unique opportunities for laboratory and field research.

Our program advances IBACS and UConn's missions of fostering innovative scholarship, diversity, and facilitating faculty-student interactions outside the classrooms. Since its inception, our program has been seeking out new perspectives, expanding our community, and empowering underrepresented voices. By working to change traditional preconceptions of what a scientist looks and acts like, the program aims to be the stewards of the next generation of scientific leaders in academia, industry, and society.

Through this special issue of the IBACS Brain, Cognition, and Language Digest, we share a snapshot of the program's history and highlight the program's current activities by featuring current students and program alumni.

We invite you to join our program and stay current with our activities by visiting our website: [cogsci.uconn.edu](http://cogsci.uconn.edu).

## COGNITIVE SCIENCE...

is the study of how intelligent beings — people, animals, and machines — perceive, act, know, and think. The field is at the intersection of many fields, including psychology, linguistics, logic, computer science, artificial intelligence, anthropology, philosophy, and neuroscience. Interdisciplinarity, collaboration, and methodological diversity are hallmarks of the growing field of cognitive science.

# HISTORY OF COGSCI: PAST & PRESENT DIRECTORS

## DR. JAY RUECKL 1996 - 2006

### ESTABLISHING THE COGSCI LEGACY



Dr. Jay Rueckl, professor from the Department of Psychological Sciences, was the inaugural director of the CogSci program. As a researcher who studies reading and memory, Dr. Rueckl's work is the epitome of the cognitive sciences. His research includes a focus

on the brain bases of reading and memory, and neural networks.

As the inaugural Director of the CogSci program, Dr. Rueckl and others involved were looking for ways to strengthen and leverage ties across various programs and departments, particularly with regards to language research. They started by establishing the undergraduate major and a talk series, both of which are active even two decades later!

Dr. Rueckl strongly believes that there are still exciting opportunities to forge connections with other programs and departments; specifically, Dr. Rueckl cites that the CogSci community could benefit from a strengthened connection with the Neag School of Education. He believes that these connections can further expand the CogSci community's interdisciplinary boundaries.

## DR. TOM BONTLY 2006 - 2011

### INTERDISCIPLINARY CULTIVATION



Dr. Tom Bontly, associate professor in the Department of Philosophy, was the first to serve as the official director of the CogSci program. Dr. Bontly's experience in the cognitive sciences predates his time at UConn; he received a minor in cognitive science in

graduate school. At the time of his directorship, Dr. Bontly's research focused on the philosophy of mind, with a specific interest in the nature of representations — a topic that intersects the philosophy and cognitive sciences domains.

During his time as director, Dr. Bontly and members of the Steering Committee developed a "memorandum of understanding" to formalize the existence of the CogSci program. They negotiated an agreement that the departments of Linguistics, Philosophy, Psychological Sciences, and Speech, Language, & Hearing Sciences would serve as the "home base" for the CogSci program. Much of what Dr. Bontly envisioned for the program has since come to fruition: a formal undergraduate major/minor, a graduate certificate program, increased interdisciplinary research, and the successful application of an Integrative Graduate Education and Research Traineeship Program (IGERT) grant.

In sum, Dr. Bontly endeavored to create a platform for interdisciplinary research and is pleased to see the progress the CogSci program has made since his time as director, and the ways in which many students and faculty benefit from the program today. He strongly believes that the incredible growth of support for the program promises exciting future developments!

“WE WANTED TO CREATE SOMETHING THAT COULD BE A PLATFORM FOR INTERDISCIPLINARY RESEARCH ... IT'S BEEN REMARKABLE TO SEE THOSE VISIONS BECOME FULFILLED.” — DR. TOM BONTLY

## DR. DIANE LILLO-MARTIN 2011 - 2014

### CREATING A COMMUNITY



Dr. Diane Lillo-Martin is a Board of Trustees Distinguished Professor and Head of the Linguistics Department at UConn, as well as Senior Scientist at Haskins Laboratories. Dr. Lillo-Martin's research explores human language acquisition. More

specifically, she studies how children acquire sign languages. Her research looks at sign language acquisition in the context of different types of input, as well as the ways in which different languages being acquired (spoken and signed) interact with one another. By studying sign language structure, Dr. Lillo-Martin's research furthers our understanding of the variability across languages.

During her time as director of the CogSci program, Dr. Lillo-Martin and members of the CogSci community were involved in the development of the undergraduate major and the graduate certificate program. Dr. Lillo-Martin (among others, notably Drs. Jim Magnuson and Whit Tabor) was also integral in the development of a grant proposal which led to the hiring of significant and contributory members of the CogSci community, including Drs. Marie Coppola (PSYC) and Emily Myers (SLHS & PSYC). She cites this experience as one that really captures the essence of the program, as it involved people across different areas of scientific study coming together and accomplishing a goal of recruiting scientific minds from different backgrounds of study to our community in order to embrace the collaborative work that is at the heart of cognitive science research.

## DR. CARL COELHO 2014 - 2017

### BREAKING BOUNDARIES



Dr. Carl Coelho is Professor Emeritus from the Department of Speech, Language, and Hearing Sciences (SLHS). Dr. Coelho's research explores acquired language disorders, and how these disorders disrupt complex language processes inherent in everyday

life. By studying language at the level of discourse, Dr. Coelho is able to examine both the linguistic and the cognitive components necessary for social interactions. More specifically, Dr. Coelho has investigated adults with aphasia, as well as adults with traumatic brain injury (TBI), and how they engage in discourse — an area that heavily relies on social cognition.

Dr. Coelho served as the director of the CogSci program from 2014 to 2017. During his time as director, Dr. Coelho was involved in the implementation of an Integrative Graduate Education and Research Training program (IGERT) grant, which facilitated the ongoing development of the CogSci program within the College of Liberal Arts and Sciences. As a former director, Dr. Coelho praises those involved in the CogSci program who embrace collaborations that transcend disciplinary silos. He believes that an increase in interdisciplinary collaborations that break traditional boundaries will enhance the diverse scientific nature of the program. In fact, Dr. Coelho recalls a former doctoral student from his lab, with a background in linguistics, successfully collaborating with computer science students to study discourse in individuals with acquired language disorders. This unique collaboration very clearly embodies the interdisciplinary nature of cognitive science!

“GOING OUT OF A COMFORT ZONE, WORKING WITH PEOPLE YOU NEVER  
ORIGINALLY THOUGHT YOU'D BE INTERESTED IN WORKING WITH, AND COMING  
OUT WITH A REALLY INTERESTING OUTCOME ... THAT'S THE POTENTIAL [OF THE  
COGNITIVE SCIENCE PROGRAM], I BELIEVE.” — DR. CARL COELHO

“AS THE DIRECTOR, I HAVE THE EXCITING OPPORTUNITY TO BE OF SERVICE TO THE COMMUNITY THAT HAS SUPPORTED ME.” — DR. ERIKA SKOE

## DR. LETTY NAIGLES 2018 - 2021

### EFFECTIVE LEADERSHIP THROUGH DEMANDING TIMES



Dr. Letty Naigles is a professor in the Department of Psychological Sciences. Dr. Naigles' research primarily focuses on the acquisition of language, and the development of cognition. Additionally, she extends these investigations to neurodivergent children, such

as young children with autism, to see how having a different brain affects language acquisition.

As director of the CogSci program, Dr. Naigles continued to stretch collaborations, particularly with folks in the computer science disciplines. At the time, Dr. Naigles noticed that students were not receiving enough experience with coding and programming that are central to the cognitive sciences. This led to the creation of Dr. Stefan Kaufmann's Coding for Cognitive Science course. Additionally, as many people were deeply disturbed by the death of George Floyd in the summer of 2020, the Africana Studies Institute put out a missive on how the University could improve the treatment of minoritized groups, especially Black people. One such way to achieve this was to have a course in every major that is related to anti-racism. Thus, Dr. Naigles, along with Dr. Bede Agocha, developed the Language and Racism course (read more on page 6).

Dr. Naigles' time as director was not without some challenges. She recalls a time where she and members of the Steering Committee were handed a problem they had not anticipated. In swift response, Dr. Naigles convened a group of stakeholders, including faculty and graduate students, to respond and remedy the situation. She cites this experience as being illustrative of the CogSci program, as folks from all areas of the community quickly came together to come up with an appropriate solution to adversity.

## DR. ERIKA SKOE 2021 - Present

### REMOVING BARRIERS



Dr. Erika Skoe is an associate professor in the Department of Speech, Language, and Hearing Sciences and the current director of the CogSci program at UConn. Dr. Skoe studies the cognitive neuroscience of hearing. She explores how the brain and mind process

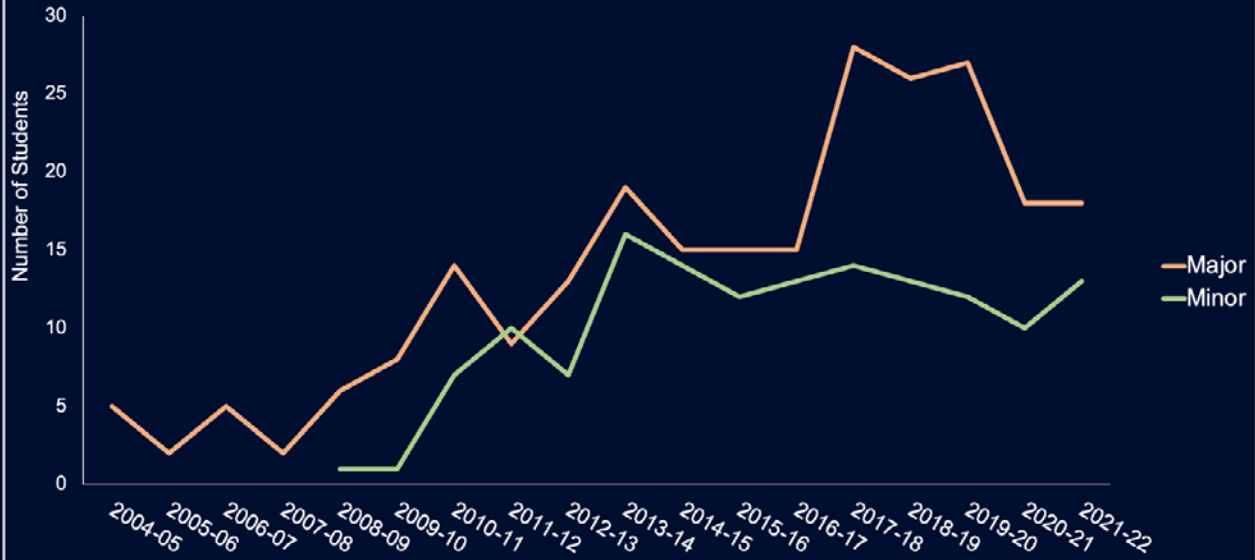
auditory signals; adjust to the quality of the listening conditions; change from past and ongoing auditory experiences; and influence the ability to communicate, learn, and perceive.

Dr. Skoe joined the UConn faculty in 2013 as part of a cluster of hires in Cognitive Science, which included Drs. Nicole Landi, Edward Large, Gerry Altmann, Eiling Yee, Mitch Green, and Dorit Bar-On. Dr. Skoe served on the Cognitive Science Steering Committee from 2018-2021, before becoming director in the Fall 2021. Dr. Skoe sees herself as a direct beneficiary of the richly collegial Cognitive Science community, and she credits this as one of the core reasons she took on the director role. She felt it was important to give service to a community that had supported her.

Dr. Skoe became a director as the University was making a full-scale return to in-person activities after pandemic shutdowns. In taking the role, Dr. Skoe realized she didn't know much about the program's origins, inspiring this special issue of the Digest. The pandemic highlighted the importance of fostering faculty-student dialog, preparing students to be global citizens, and removing barriers to educational participation. With this backdrop, Dr. Skoe invited graduate students onto the Cognitive Science Steering Committee and oversaw a new program that launched in the summer of 2021 to encourage more cognitive science students to study abroad (for more see page 9). Dr. Skoe believes that the transformative experience of studying and traveling abroad should not be limited to just those who can afford it. She is excited that the program, which helps offset the participation cost, will continue in the summer of 2023.

# UNDERGRADUATE PROGRAMS

Over the span of 18 years, the program has seen an approximate **260% increase** in undergraduates graduating with a major/minor in CogSci!



## NEW UNDERGRADUATE COURSE OFFERINGS:

In addition to offering a foundational course in Cognitive Science (COGS 2201) and an upper-level seminar (COGS 3584), starting in 2020, the program now offers two new courses:

### **Language & Racism (COGS 2345)**

Examines the relationships between language use, both historically and across the lifespan, and the social construction of race, racism, and racial identity, with particular emphasis on racial politics in the United States.

### **Coding in Cognitive Science (COGS 2500Q)**

Introduction to computer programming for students with little or no prior programming experience. Core concepts and essential skills, with special emphasis on typical tasks and applications in the cognitive sciences are taught in this course.



One of the best features of the CogSci program is that we excel at helping students to find their research passions. All of the CogSci faculty pride ourselves at being very good at getting students involved in research as soon as they want to be involved [in CogSci research].”

- **Dr. William Snyder**  
DIRECTOR OF UNDERGRADUATE  
STUDIES IN COGSCI



# STUDY ABROAD TRAVEL AWARD 2022 RECIPIENTS

In 2022, the Cognitive Science Program launched the Cognitive Science Study Abroad Travel Award Program. This program funded three \$2,000 awards to cover travel costs associated with a UConn study abroad program.



## VALERIE SAYKINA '25

is an undergraduate CogSci major. She attended the Interdisciplinary Ethnography Field School Program in Mauritius. In reflecting upon her

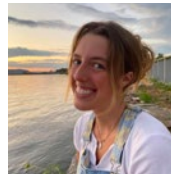
experience, Valerie views Mauritius as a unique opportunity to experience her field of study in an environment vastly different from the surroundings of Storrs, CT. One such part of her research project involved a seemingly simple questionnaire, which asked the innocuous question: "How many years of education have you completed?" When asked this question, individuals native to Mauritius responded with indecipherable answers, such as "F5", or "F4," and even "SC" and "CPE." Valerie quickly realized that in our American education system, we were only taught to understand education as captured by the K-12 system. In reflecting upon her experience abroad, Valerie now realizes that being knowledgeable in how individuals differ across cultures in their interpretation of simple questions is extremely important.



## CAMRYN WALSH '23

is an undergraduate student studying Allied Health and Cognitive Sciences and was a recipient of the '22 Cognitive Science Study Abroad Travel Award.

She attended the Neuroscience Study Abroad Summer Program in Salamanca, Spain. During her time in Salamanca, Camryn was exposed to the Spanish language and culture in ways she had never experienced before. Camryn hopes to go back to Salamanca some day, and she strongly encourages her fellow CogSci peers to consider a study abroad experience as it may expose them to culture and friendships that will leave an impression on them for a lifetime.



## AUDREY BUSH '23

is an undergraduate student studying cognitive science and is one of the students who received the '22 Cognitive Science Study Abroad Travel Award.

She attended the Interdisciplinary Ethnography Field School Program in Mauritius. Prior to studying abroad, Audrey took Cognitive Anthropology (ANTH 3250) with Dr. Dimitris Xygalatas. Audrey was enthralled by this course, largely because of Dr. Xygalatas' ability to make connections between the course's content and his own research that he conducts in Mauritius. In ANTH 3250, Audrey was captivated by the ceremonial act known as the Kavadi that takes place during the festival of Thaipusam. To her delight, she later experienced the festival firsthand during her time abroad in Mauritius, and she cites this event as being one of the most memorable experiences of her educational career. Without the CogSci Study Abroad Travel Award, Audrey believes that none of this would have been possible.



“ This study abroad program is like no other. We don't go abroad just to have classes at another institution. Learning takes place wherever life happens. We have our meetings at local homes, temples, and beaches, and we travel around the island to interact with Mauritian people, learn about their culture, and explore ways of studying human interactions in real-life settings.”

– Dr. Dimitris Xygalatas on the Interdisciplinary Ethnography Field School Program in Mauritius

LEARN MORE ABOUT THE STUDY  
ABROAD TRAVEL AWARD AT:



# STUDENT ACCOMPLISHMENTS

## OFFICE OF UNDERGRADUATE RESEARCH SUMMARY OF AWARDS

CogSci students were recently named recipients of a number of prestigious and competitive awards.

### SHARE

The SHARE program supports undergraduate research projects in the social sciences, humanities, and arts. SHARE is designed especially for students in the earlier stages of their college careers as a means of introducing students to research in their chosen field and of developing skills they will need for further research projects.

#### RECIPIENTS:

<b>Divya Ganugapati '19</b>	<b>Stephen Davey '22</b>
<b>Caroline Hebert '21</b>	<b>Calli Smith '22</b>
	<b>Kavya Krishnan '23</b>

### IDEA GRANT

The UConn IDEA Grant program awards funding to support student-designed and student-led projects, including creative endeavors, community service initiatives, entrepreneurial ventures, research projects, and other original and innovative projects.

#### RECIPIENTS:

<b>Olivia Maher '19</b>	<b>Sarah Arnett '20</b>
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### SURF AWARD

Summer Undergraduate Research Fund (SURF) Awards support University of Connecticut full-time undergraduate students in summer research or creative projects.

#### RECIPIENTS:

<b>Elizabeth Gernert '18</b>	<b>Caroline Hebert '21</b>
<b>Emma Hungaski '19</b>	<b>John Wohl '21</b>







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## COGSCI STUDENTS ARE ACTIVE AND PRODUCTIVE MEMBERS OF THE UNIVERSITY COMMUNITY.

Read more about their accomplishments in UConn Today!



### 1 Rose Pacik-Nelson '23

(second from right) is an undergraduate double majoring in Physiology and Neurobiology and Cognitive Science. Rose was named a Gilman Scholar for the March 2022 application cycle.



### 2 Irene Soteriou '23

is an honors double major in Statistics and Cognitive Science. Irene was named a Truman Scholar, marking the tenth time since 1986 that a UConn student has won the prestigious honor!



### 3 Connor Rickermann '23

is a dual degree major in Computer Science Engineering and Cognitive Sciences. Connor was at the center of the Bike Walk Bolton, UConn Service Learning, and Anthropology 3340 partnership, helping to collect data on how people use the local Hop River Trail.



### 4 Pavitra Makarla '21

majored in Cognitive Science and minored in Neuroscience and Psychological sciences. Pavitra studied the use of sarcasm with Dr. Gitte Joergensen, a previous post-doctoral fellow in Dr. Gerry Altmann's lab who is now a full-time IBACS research associate.



### 5 Emily Kaufman '16

double majored in Human Rights and Cognitive Science. Emily currently works as an investigative researcher with the Anti-Defamation League's Center on Extremism, tracking online hate messages on various platforms.

# RECENT ALUMNI SPOTLIGHT



## LIZ GERNERT CHAMPIONING PASSIONS

Alumna Liz Gernert found her passion for medicine through the CogSci major; specifically, the course Anatomy and Physiology of Speech and Hearing (taught by director

Erika Skoe) reaffirmed her decision to pursue a medical career. As a current third-year medical student at Lake Erie College of Osteopathic Medicine (Erie, PA) interested in pediatrics and emergency medicine, Liz reflects on how the CogSci program was extremely formative for her personal life and professional career. Specifically, Liz cites her advisor, Dr. Snyder, as being an asset in his ability to help her to balance pre-med requirements alongside her CogSci major. Additionally, Dr. Snyder and Dr. Skoe encouraged Liz to complete the Honors Program. Participation in the prestigious Honors Program resulted in a thesis in auditory neuroscience that gave her research experience to make her a competitive medical school applicant and, more importantly, presented her with personal scientific growth. Liz writes enthusiastically that she “never dreamed I would find such amazing mentors and people who believed in my success even when I didn’t. I would not be where I am without my CogSci advisors.”



## TONI SMITH FOUNDATION FOR LIFELONG PASSION

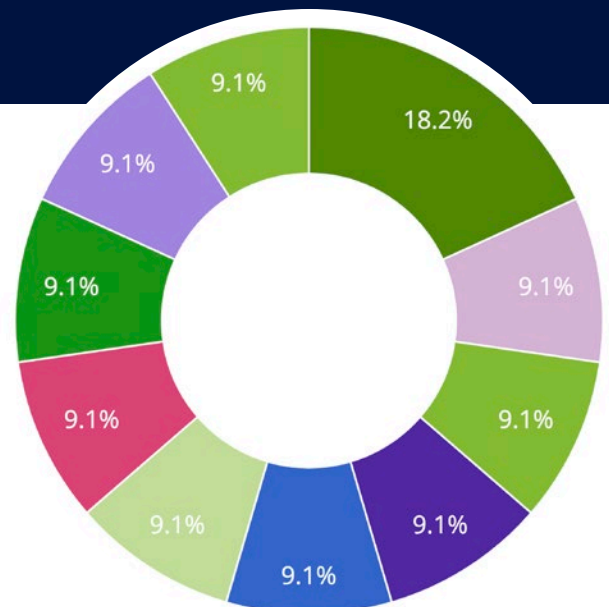
Toni Smith, a CogSci alumna, graduated from UConn in 2018. Toni has always been curious about the inner workings of

other people, and pursuing a major in CogSci allowed her to explore that curiosity from different perspectives. She notes that her favorite course from her time at UConn was Philosophy of Mind, as it exposed her to new ways of thinking about the nature of mental experiences. Additionally, being a part of the CogSci program influenced the extent to which she values interdisciplinary research. This led her to follow her passion in joining a research lab, which in turn cemented her desire to pursue a research career. Toni is now a Ph.D. student studying cognition and cognitive neuroscience at Michigan State University.

Toni encourages current CogSci undergraduates to follow their curiosity, and to embrace being a part of an interdisciplinary program which affords opportunities to take courses from different disciplines, meet students from diverse backgrounds, and encourages involvement in research that traverses multiple fields.

Approximately half of our CogSci undergraduates move on to employment after graduation. They are most frequently employed by companies in biotech, software, and product design, or, find themselves in medical and research settings. One third of CogSci graduates attend graduate school. To the right is a snapshot of the fields they have pursued from 2016-present.

- Computer Science
- Neuroscience and Education
- Applied Cognitive Neuroscience
- Nursing
- Business Management
- Social Work
- Dental Medicine
- Strategic Communication
- Law
- UX Design



# 10TH ANNIVERSARY OF GRADUATE CERTIFICATE IN COGSCI

- Students enrolled in the Graduate Certificate in the CogSci program come from **over half a dozen departments** across the university!
- The program is also home to **a growing number of continuing education students** pursuing the certificate for professional development.
- Since the graduate program's creation, **34 students have been awarded** the graduate CogSci certificate!



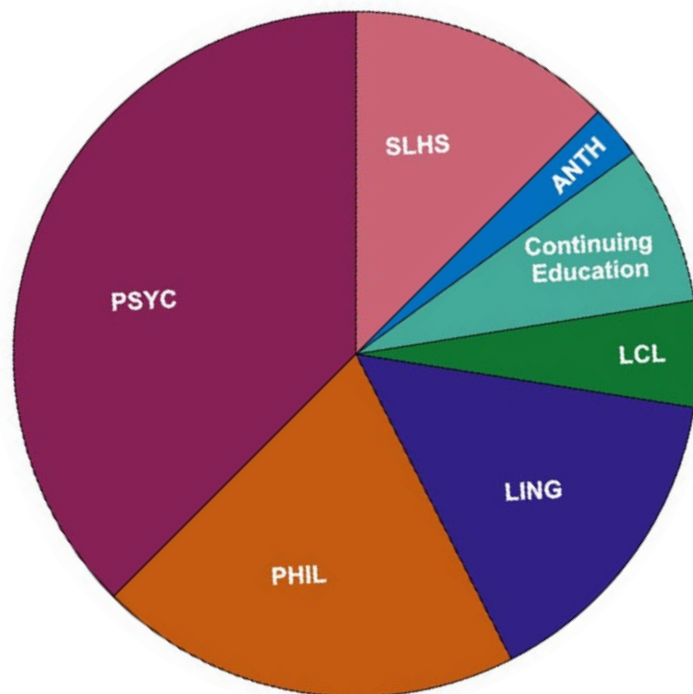
## AN INTERDISCIPLINARY POWERHOUSE

**JEFFREY SPENNER**  
Current Certificate Student

As the assistant director of the premier U.S. Coast Guard Band, it may seem at first glance that Jeffrey would be an unlikely CogSci student. Jeffrey, however, has always been interested in the inner workings of the brain. He finally decided to act upon his interest when his wife suffered a severe traumatic brain injury in 2016. To act as an effective caregiver during his wife's recovery, Jeffrey leaned upon his passion for pursuing knowledge about the brain and decided to formalize his cognitive science training.

In the CogSci program, Jeffrey has not only received training about the inner workings of the brain, but also gained insight into how to do his job more effectively. In his role conducting one of America's top classical music ensembles, his understanding of cognitive processes helps him to appreciate the inner workings of music, how it's perceived by both musicians and audiences, and the leadership psychology inherent in his position.

In reflecting on his time thus far in the CogSci program, Jeffrey does not recount the times where scholars and students agreed, but instead, cites the colloquial disagreements in the field of cognitive science to be the instances where his learning blossoms the most. Jeffrey astutely says, "It is where we [those in the CogSci program] disagree and there's friction that is often the most interesting realm to explore". Above all, the interdisciplinary nature of the CogSci program affords Jeffrey the ability to move from a "self-proclaimed outsider" in the field of cognitive science to a well-versed, active participant in the "rich mosaic that is the field of Cognitive Science."



## VERSATILE LEARNING OPPORTUNITIES

**ELENA ECHARRI**  
Certificate Alumna

Elena Echarrri was awarded the CogSci graduate certificate in spring 2022, but it was not an easy journey. Located in Florida, Elena was not ready to fully commit to a doctoral program in Connecticut, especially as a mother and a caregiver. At the time, the graduate certificate was not available to continuing education students. However, when the CogSci Steering Committee made the ultimate decision to make the certificate available to continuing education students, Dr. Letty Naigles, Director of the CogSci program at the time, notified Elena right away. Additionally, during the COVID-19 pandemic, classes were being offered virtually; it was the perfect opportunity for Elena to complete the graduate certificate program!

Since her completion of the certificate, Elena has continued to teach in the communications department at the Florida International University. Being one of the only faculty members in her department with a strong understanding of the cognitive processes behind communication, she has been nominated to give talks and teach courses on how these two areas intersect. In sum, Elena is very grateful for the experience she had in the CogSci program. It has opened many doors and pathways that she never even knew existed!

# TESTIMONIES FROM CURRENT COGSCI GRADUATE CERTIFICATE STUDENTS



“ The Cognitive Science Graduate Certificate is a great example of UConn’s support of such interdisciplinary research. **Being part of the certificate program allowed me to cross interdisciplinary bridges, access other departments, develop a more comprehensive theory at the end of my Ph.D., and broaden my future career prospects.**”

- **Aliyar Ozercan**  
PHILOSOPHY

“ It is very easy to get stuck inside a bubble of the same researchers with the same perspectives, which does not always facilitate progress. Having opportunities to discuss your work with people outside of your usual field as well as being exposed to what sorts of things other people are working on can help break out of this insular bubble.”

- **Maddie Quam**  
PSYCHOLOGICAL SCIENCES



“ I have picked up a number of **transferable skills**, including how to initiate interdisciplinary and collaborative projects, during my time in the CogSci program that will be valuable for any job I may have in the future.”

- **Cynthia Boo**  
PSYCHOLOGICAL SCIENCES





“ I chose to pursue a certificate in CogSci as part of my graduate training as a means to gain broad interdisciplinary training in the cognitive sciences. Through the CogSci program, **I met numerous students and faculty members who I might not have connected with otherwise.** Learning about their research truly contributed to the breadth of my education here at UConn.”

- **Nikole Giovanne**

SPEECH, LANGUAGE, AND HEARING SCIENCES

“ Thanks to the cognitive science community, I get the chance to communicate and even collaborate with both professors and trainees affiliated with this program but in different departments. **It makes my Ph.D. journey more exciting, eye-opening and productive.**”

- **Kaidi Chen**

LINGUISTICS



“ As a speech-language pathologist and researcher, I believe it is integral to view science through multiple lenses. The CogSci certificate offered me an opportunity **to study outside of my silo.**”

- **Lee Drown**

SPEECH, LANGUAGE, AND HEARING SCIENCES

# COGSCI RESEARCH HIGHLIGHTS

Approximately 52% of IBACS seed funding in the first 6 years went to Language Sciences and other Cognitive Science projects.

## RECENT IBACS-SUPPORTED GRADUATE STUDENT RESEARCH AWARDED TO COGSCI CERTIFICATE STUDENTS

### Aliyar Ozercan

(Advisor: William Lycan, Philosophy): Adult processing of late-to-develop syntactic structures: An fMRI study.

### Cynthia Boo

(Advisor: Letty Naigles, Psychological Sciences): Exploration of two different contexts to elicit pragmatic language markers: Filled pauses & discourse markers.

### Lee Drown

(Advisor: Rachel Theodore, SLHS): The time course of talker discrimination in individuals with lower reading ability.

## UNDERGRADUATE RESEARCH

The CogSci program supports hands-on experiential learning through its Undergraduate Research course offering (COGS 3589). Working in a faculty-directed research lab, students have the chance to be part of an existing projects, or spearhead their own. Since 2008, more than 180 students have enrolled in this course.

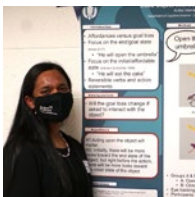


### Olivia Arciero '22

(Advisor: Letty Naigles, Psychological Sciences): Predictors of Individual Differences in Semantic Competition During Lexical Access

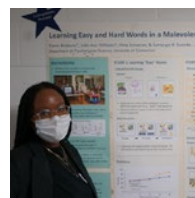
### Laila Almotwaly '23 (COGS/PNB)

(Advisor: Geoffrey Tanner, PNB): Mechanistic determinants of ketone-body-induced amelioration of pathological markers in a Drosophila model of Parkinson's Disease



### Anika Veeraraghav '22

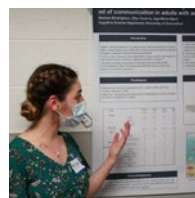
(Advisor: Gerry Altmann, Psychological Sciences): Does Object Interaction Change the Goal of Eye Movements?



### Julie-Ann Williams '23

(Advisor: Umay Suanda, Psychological Sciences): Learning Words from Referentially Ambiguous Input: The Importance of Considering the Output of Learning

**Xinming Zhou '22** (Advisor: Emily Myers, SLHS & Psychological Sciences): How Prior Experience Shapes Accent Adaptation



### Marissa Birmingham '24

(Advisor: Inge-Marie Eigsti, Psychological Sciences): The use of speech, facial expressions, & gestures as a primary method of communication in adults with autism spectrum disorder

# GRADUATE AND UNDERGRADUATE COLLABORATION

## RESEARCH SPOTLIGHT



## EMMA HODGES '23

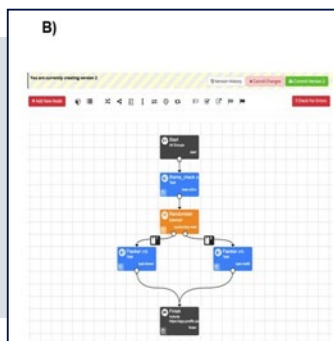
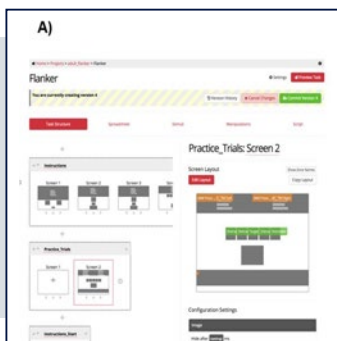
### ATTENTION & SPEECH PERCEPTION

**Advisor: Rachel M. Theodore, SLHS**

**Graduate Student Mentor: Shawn Cummings, SLHS**

Emma Hodges is an undergraduate senior in the CogSci program. As part of her studies, Emma was drawn to the major of CogSci because of its interdisciplinary approach to the human mind. Her honors thesis explores the role of attention in lexically guided perceptual learning. Through an online experiment, she will be testing participants under focused and distracted conditions to better understand the cognitive resources used when adjusting to talker-specific speech. She hopes her honors thesis will contribute to a broader understanding of perceptual mechanisms of the human mind in different learning environments.

Pictured below is a screenshot taken from Gorilla Experiment Builder ([app.gorilla.sc](http://app.gorilla.sc)), a platform that allows for researchers to design experiments for online data collection. Panels A & B show examples of how Emma is engaging in cutting-edge research practices via this online data collection platform. Emma's trailblazing in the online data collection arena will allow for more diversity in her participant pool, as well as promote efficient data collection practices!



“ Collaborating with Emma on this project has been a joy for a multitude of reasons, but what immediately stands out is her sharp insight towards how our generally basic-science oriented research can find applicability in more ecologically valid situations! My introduction to Emma’s thesis was through her describing a personal anecdote — that in lecture settings, classmates both seemed to pay less attention to and in turn report more difficulty understanding professors with speech patterns different from their own. This situation perfectly scaffolds our investigation into attention and adaptation to atypical speech, and exemplifies Emma’s ability to connect CogSci in the lab to CogSci in the world!”

— Shawn Cummings, Ph.D. Student

The Institute for the Brain and Cognitive Sciences publishes its Brain, Cognition & Language Research Digest for the purpose of community outreach. This issue includes research from Speech, Language and Hearing Sciences; Psychological Sciences; Linguistics; and Anthropology.

IBACS Stats (OCTOBER 2022)

\$2.9 MILLION

in student fellowships, seed funding, and group and meeting support

243

internal affiliates across 34 departments

67

seed grants

120

graduate fellowships

79

undergraduate awards

14

research assistantships in neuroimaging

## OUR RESEARCH COMMUNITY

### WHO ARE WE?

The Institute for the Brain and Cognitive Sciences (IBACS) serves as an incubator for research across the brain and cognitive sciences at UConn and beyond, promoting and supporting the interdisciplinary science of the mind and its realization in biological and artificial systems. The Institute is a collaboration between multiple departments and campuses of the University of Connecticut. Educational seminars and workshops, community outreach, graduate and undergraduate fellowships, and pilot grant opportunities are available to our affiliates. Through these various mechanisms for fostering novel research across the biological and related physical, psychological, and computational sciences, IBACS provides support for the first steps in the many research programs that go on to receive subsequent federal funding from public agencies such as the National Institutes of Health (NIH) and the National Science Foundation (NSF).

### ABOUT THE DIGEST

The Digest is an annual publication intended to highlight research conducted by IBACS-affiliated scientists across UConn. Each issue focuses on a different theme among the many that run through our research community. In this issue, we focused on providing a snapshot of the Cognitive Science program's history. We talked to the program's current students and alumni, as well as faculty affiliates. We focused on the many achievements of individuals a part of the CogSci community, as well as the various opportunities the program has to offer to members inside and outside of UConn.

### GRADUATE STUDENT EDITORS

Cynthia Boo & Lee Drown

### TO LEARN MORE

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### CONGRATULATIONS

Congratulations to professor Jim Magnuson for being a newly elected AAAS fellow.



### IN MEMORIAM

The Brain Imaging Research Center mourns the recent passing of Dr. Ross W. Buck.

