2024 Founding Generation Summer Fellowship Faculty Hosts

Please feel free to reach out to the host faculty members to discuss their project. Note the deadline for submissions is February 14, 2024.

Nicki Aubuchon-Endsley
Affiliation: The University of Tulsa
Contact email: nia2175@utulsa.edu
Planned project: A Founding Generation Summer Intern in the Perinatal Psychobiology Lab at the University of Tulsa will have the opportunity to help collect data for a longitudinal project examining maternal perinatal mental health, physical health, and nutritional markers in relation to maternal postnatal adjustment and infant development from 6 to 18 months of age in a sample of diverse women and infants. They will also obtain a range of research experience in completing data management, data analysis (using specialized modeling statistics), and construction of a research poster, and possibly a paper.

Marina Bazhydai
Affiliation: Lancaster University, UK
Contact email: m.bazhydai@lancaster.ac.uk
Planned project: I would be delighted to serve as a mentor for the summer intern to be based at the Lancaster University's Babylab in my Active Learning Lab research group (http://wp.lancs.ac.uk/all/). This internship will provide them with an opportunity to become actively engaged in developmental research, specifically with pre-verbal infants. Under direct supervision and mentorship of Dr Marina Bazhydai, the intern will be trained to recruit and test infants in a live interactive lab-based paradigm. Specifically, they will work on the pre-registered study entitled, The effect of information domain on infants' information seeking from knowledgeable adults. In this live interactive study, we will look at 12-months-old infants' active information seeking in situations of referential uncertainty. From prior literature, we know that infants expect to learn from knowledgeable adults. Here we will test two research questions. First, we will test whether, in a situation of referential uncertainty (i.e., when unable to locate a referent for a novel label), 12-months-old infants use social referencing to selectively request information from a knowledgeable adult as opposed to an engaging but uninformative adult. Second, we

will test if this selectivity generalizes across information domains. We will measure infants' social referencing in a situation when an adult has established himself as knowledgeable in one domain (e.g., object labels) but the uncertainty is about a different domain (e.g., object function). For the first question we expect that in situations of referential uncertainty infants will selectively refer (as measured by social looks) to the adult who has previously shown to be knowledgeable in that information domain (i.e., familiar and unfamiliar object labels) compared to the adult who has been engaging but uninformative. We expect that infants will not show such preference for the Informant during the familiarization and training trials which do not present infants with situations of referential uncertainty. For the second question, we will test two competing hypotheses. According to the generalizability account, we expect that infants would selectively refer (as measured by social looks) to the knowledgeable adult (i.e., exhibiting knowledge about object labels) even when the information domain has changed (i.e., the adult is knowledgeable about labels but the needed information is about object functions). The infant would encode the informant's competence as generic and transferrable across different information domains. Alternatively, according to the expertise account, infants would only selectively seek information about the domain the adult has shown to be knowledgeable in (e.g., information about object labels or information about functional object functions), but not when the domain changes. Here, infants would encode informant's competence to be specific to a particular information domain. Overall, the study would advance our knowledge of infants' understanding of epistemic value of social partners and their early developing capacity to selective seek information in uncertainty. The intern's main duties will be to recruit and test infants at the Lancaster Babylab. The intern will become an active member of the Babylab and the Active Learning Lab research groups with an opportunity to become involved in other ongoing research projects, including cutting edge eye-tracking and behavioural methods in developmental science. Other research tasks may include assisting with conducting literature searches, novel experimental tasks and questionnaire development and evaluation, coding infant-caregiver interactions from video recordings, assisting with data cleaning and analyses in R, as well as engaging with the public in outreach events.

Elika Bergelson
Affiliation: Harvard University
Contact email: elika_bergelson@fas.harvard.edu
Planned project: There will be a variety of projects that the student can jump in on and contribute to as part of a shared developmental summer internship program, involving questions regarding early language development (e.g. early production and comprehension in the lab and in naturalistic recordings)

Sarah Berger
Affiliation: College of Staten Island & the Graduate Center of the City University of New York
Contact email: sarah.berger@csi.cuny.edu
Planned project: Research in my lab investigates the organization of attention in infancy by documenting the interaction between cognitive and motor development, particularly, cognition-action trade-offs. Another line of work examines the relation between sleep and motor development in infancy. Both how sleep impacts learning, but also how the acquisition of new motor skills changes infants' sleep.

Jeremy Borjon
Affiliation: University of Houston
Contact email: jiborjon@uh.edu
Planned project: Student will participate in the pre-processing and analysis of infant vocalization and posture data during naturalistic free play with their caregiver.

Samuel Forbes
Affiliation: Durham University
Contact email: samuel.forbes@durham.ac.uk
Planned project: The Durham Babylab focuses on infant word learning and associated factors, including cognitive development, behaviour, individual differences and environment. The student will have the opportunity to work on an existing project looking at individual differences in infant word learning, gaining experience with eye-tracking methodology, including advanced analysis and potentially pupillometry if interested. There will be opportunities to learn from and meet PhD students and researchers in the lab as well as with me as the PI, and potential for developing cutting-edge analysis skills in R and / or gaining some experience in fNIRS if interested. We are also happy to support student-led projects if the scope fits with our lab.

Kelsey Frewin
Affiliation: University of East Anglia (UEA)
Contact email: K.Frewin@uea.ac.uk
Planned project: Knowing how to identify categories, such as apples or dogs, is a fundamental building block for many aspects of cognition. For example, categorising is essential in encoding new information into memory or applying existing knowledge to new situations. However, the role of language and labelling in early category learning remains highly debated. For example, some research shows that providing infants and young children with labels (spoken or signed) facilitates their category learning through the discovery of commonalities between exemplars. Yet, evidence also shows that young infants can learn categories in the absence of language. Likely, language supports the process of object categorisation, but whether it is necessary for category learning is an open question. In our project, we will provide a critical test of this fundamental question by directly exploring whether category learning occurs when infants experience reduced access to language. Using highly innovative EEG and eye-tracking measures of prior category knowledge, the student will help us assess existing category knowledge in a cohort of deaf infants born to hearing parents who often have reduced access to the language/s used in the family home. We will compare their category knowledge to the category knowledge of hearing infants born to hearing parents and deaf infants born to deaf parents who have access to language from birth. The student will have the exciting opportunity to get involved in all stages of the research process, such as collecting data with infant participants using EEG and eye-tracking equipment, coding video data, learning to score standardised measures of development, recording parent-child interactions, contributing to analysis and so much more. We will also collect a wide range of other measures (e.g., access to language, vocabulary development) and the student will be able to formulate their own research question using these measures, if they wish. This is a unique opportunity

for an undergraduate student to engage with a wide range of developmental research methods and infants with diverse language experiences. The student will be based in beautiful Norwich at the University of East Anglia, UK for the duration of the internship.

Anna Gui
Affiliation: University of Essex
Contact email: anna.gui@essex.ac.uk
Planned project: The planned research aims to demonstrate the applicability of using real time Artificial Intelligence (AI)-enhanced brain imaging to map individual differences in the development of the social brain. Since brain responses depend on the interplay between genetic make-up and previous experiences, classic experimental paradigms that rely on group-level findings are not suitable to capture individual differences. We applied novel AI-based approach called Neuroadaptive Bayesian Optimisation (NBO) to infant electro-encephalography (EEG) to understand how selected infant neural signals encode early social cues such as the parent's smile or eye contact. Additionally, 10-minutes episodes of parent-child interaction have been video-recorded. In this project, the student will be trained in EEG and behavioural (video-coding) data analyses to relate the outcome of the EEG task to infant behaviour during parent-child interaction. They will have the opportunity to meet the multi-disciplinary team who set up the (Behaviour and Online Neuroimaging to study the Development of Socialisation) BONDS study. The project could be done remotely, but the student is also welcome to visit the lab and learn the testing procedures. Additionally, they can be involved in the BONDS team's dissemination activities to deliver scientific content to the parents who took part in the study. The research conducted by the student will be important to demonstrate that individualised neuroimaging-based techniques can be informative of individual differences in the developmental trajectories of the social brain. This will lay the foundation for brain-based screening programs and have potential applications in neuroimaging-informed personalized interventions for children who show early atypicalities in social engagement.

Kiley Hamlin
Affiliation: The Centre for Infant Cognition - UBC
Contact email: hamlinlab@psych.ubc.ca
Planned project: In the '500 babies' project, we are interested in learning how infants think about the social world. As adults, we judge other individuals' actions as good or bad, as deserving of reward or punishment, and as morally praiseworthy or blameworthy. To learn more about the origins of our "moral compass", we explore social evaluations in preverbal infants, prior to the (extensive) influence of cultural norms and values. We use puppet shows, videos, and interactive studies to probe how infants' early evaluations relate to underlying features of their personality, other social and emotional processes, and later prosocial behaviorsThe student will work closely with graduate students, research managers, and senior research assistants to manage the "500 babies" project. The student will receive extensive training before assuming the following tasks: - Maintain ongoing positive relationships with participating families, including contacting families and scheduling appointments using a complex research database - Set up experimental equipment according to prescribed protocols (e.g. recording equipment, puppet show stage) - Enter data into MS Excel/Google spreadsheets according to established protocols - Help to administer studies with infants and toddlers (puppet shows, interactive games, video

studies) - Assist with processing data, with opportunities to develop skills in R, Adobe Suite, jHab, and TheObserverXT - Engage in opportunities to present research findings at lab meetings and local conferences. The student will be part of a dynamic team and will be expected to engage in regular meetings with graduate students, lab managers and fellow research assistants. They will be encouraged to ask questions and suggest ways in which their learning experience could be improved. The tasks will require a strong commitment in time and effort as well as extensive practice in varying settings. This role will provide plenty of opportunities for the student to interact with people from different backgrounds, build connections, and develop professional, social, and communication skills. The job will also help the student cultivate a sense of responsibility, self-knowledge, and self-confidence in a research setting. We like to maintain a positive and cohesive work environment, so the student will be invited to participate in a number of lab socials and team-building activities.

Alexandra Hendry
Affiliation: University of Oxford
Contact email: alexandra.hendry@psy.ox.ac.uk
Planned project: This internship will focus on producing high-quality data for the evaluation of an intervention to support executive function development in toddlers with a connection to autism or ADHD (see www.startproject.info). Specifically, the intern will contribute to coding (for behavioural tasks) or cleaning (for computerised and parent-report tasks) data collected at intervention end-point and/or follow-up point. Depending on their interests, interns will also be encouraged to contribute to public engagement activities such as drafting lay research summaries for the Oxford BabyLab social media channels.

Melissa Kibbe
Affiliation: Boston University
Contact email: melissa.kibbe@gmail.com
Planned project: The student will participate in research on the development of object, numerical, or social cognition in infants. The student will get training in a variety of behavioral methods (violation of expectation, manual search, etc.), interact with babies and their families, and will get to work in a super supportive and fun team!

Eon-Suk Ko
Affiliation: Chosun University
Contact email: eonsuk@gmail.com
Planned project: Our lab, dedicated to infants' language acquisition research, is offering a dynamic internship program for motivated students. Depending on the applicant's background and interests, the intern may contribute to one of our ongoing projects. These include investigating the effects of musical experiences on language development, exploring the effects of maternal question frequency and types on child language outcome, or participating in a comparative study of multimodal cues in word learning across different languages and cultures. The intern will engage in literature reviews, data collection, and analysis, utilizing tools such as CLAN, Praat, ELAN, as well as gaining hands-on experience with coding in

R and/or Python. This internship provides a unique opportunity for students to actively contribute to cutting-edge research in the field of language acquisition while developing valuable skills in experimental design and data analysis.

Sarah Kucker
Affiliation: Southern Methodist University
Contact email: skucker@smu.edu
Planned project: The Kids in Development (KID) lab at SMU examines young children's cognitive and language development with an emphasis on the role of technology and digital media. Our goal is to understand the pathways that lead to successful development of all children by measuring individual differences in language and cognition across a variety of contexts. Research in the summer of 2024 will include further examination of individual differences in technology use and its impact on infant vocabulary as well as variation in the quality of digital media experience in facilitating language broadly. This will include an in-depth look at both child and family variables (temperament, SES), but also digital media (educational quality, content) and how it impacts multiple elements of the child's vocabulary and language learning.

Elena Luchkina
Affiliation: Harvard University
Contact email: elenaluchkina@fas.harvard.edu
Planned project: Our study investigates the relation between language and abstract cognition in early childhood. Unlike tangible objects, abstract ideas like "equal," "same," or "different" lack a fixed visual form and aren't easily learned through observation. Mental representations of these abstract relations are less spontaneously recalled compared to representations of concrete objects. However, symbols like words can be particularly effective in aiding infants and young children to learn and remember abstract concepts. The study aims to assess the role of language in facilitating the learning and retrieval of abstract relations in young minds.

Rochelle Newman
Affiliation: University of Maryland
Contact email: rnewman1@umd.edu
Planned project: Student would work on multiple studies, with young children and possibly also with canines; studies with young children would focus on bilingual children and the impact of code switching.

Efthymios Papatzikis
Affiliation: Oslo Metropolitan University
Contact email: efp331@mail.harvard.edu
Planned project: It has been extensively shown that music experience impacts the human brain very early in life while music perception is an inborn human trait starting in utero and continuing across the lifespan. Documenting music'seffects on infant development, researchers have shown, on the one hand,

that passive music listening engages frontal, temporal, parietal, subcortical, limbic and paralimbic areas related to attention, motor functions, and memory while on the other hand, active engagement with music can activate the reward and habits systems (i.e., the basal ganglia, the orbitofrontal regions, the amygdala, and the hippocampus) developing and organizing their neural networks involved in human interactions and emotional regulation. It has been also shown that music can positively modulate physical states (i.e., heart and respiratory rate, oxygen saturation) very early in life while having an impact on cognitive skills, too. Despite the compelling evidence that highlights the beneficial relationship between music and brain development in early life, there is a notable lack of developmental information specific to the pediatric population of premature infants. As a researcher, I am eager to bridge this knowledge gap. Therefore, by choosing to collaborate with my laboratory at Oslo Metropolitan University in Norway, either in person or remotely, you will contribute to our understanding of the musical brain in newborns and infants. Your internship will encompass: (a) learning the basics of premature infant EEG data acquisition and analysis, focusing on infant-related data; (b) collecting, organizing, and synthesizing literature on the subject; and (c) participating in the analysis of sound data related to music played for infants in the NICU or shortly after discharge. Training for both EEG and sound analysis software will be provided, and no prior experience is necessary. Please contact me for more information.

Livio Provenzi
Affiliation: University of Pavia
Contact email: livio.provenzi@unipv.it
Planned project: At the Developmental Psychobiology Lab (dpb lab) of the University of Pavia we conduct research on the psychobiological and neurophysiological correlates of early parent-infant interaction in typical and atypical developmental conditions. The student who will be enrolled at the dpb lab will have opportunity to engage in at least one of these projects: (a) ARIEL project, the study of parasympathetic co-regulation via infrared thermal imaging during mother-infant technoferenced interaction; (b) 2-BRAINED project, an EEG hyperscanning study on inter-brain co-regulation between parents and preterm infants; (c) HEADCAM project, a study on the association between shared manipulation of the physical environment and later language development in preterm infants. The student will engage in the following tasks: (a) experimental setup and data collection; (b) data analysis and interpretation; (c) lab meetings. The analysis of secondary data is an option that can be further explored. The internship will include remote connections and off-line work before, during, and after the visiting period. The internship program could be finalized to achieve one of these products: (a) abstract to be presented at international congress; (b) setting up a review protocol; (c) setting up an original data manuscript.

Carolyn Quam
Affiliation: Portland State University
Contact email: cquam@pdx.edu
Planned project: An ICIS Founding Generation Fellow could help with an ongoing study in the Child Language Learning Center in the Department of Speech and Hearing Sciences at Portland State University. We are collaborating with Dr. Sarah Creel at UC San Diego on a line of work that looks at word recognition and speech-sound processing in Mandarin-English bilingual adult participants. The primary

goal of the research is to learn about how experience with English for native speakers of Mandarin Chinese can cause attrition (loss of fluency) of sound processing in their native language. We use an EyeLink eye-tracker to test our hypotheses, measuring participants' looking patterns as they recognize pictures that match spoken words.

Valentina Riva
Affiliation: Scientific Institute IRCCS Medea, Bosisio Parini, Italy
Contact email: valentina.riva@lanostrafamiglia.it
Planned project: The student will participate in an ongoing longitudinal project focusing on infant siblings of autistic children. The project explores individual differences in (multi)sensory processing during the first three years of life and examines the association between early markers and later social communication outcomes. The project employs a range of clinical and experimental measures, such as EEG and eye-tracking.

AJ Schwichtenberg
Affiliation: Purdue University
Contact email: ajschwichtenberg@purdue.edu
Planned project: Students with assist with the Sleep and Health in the Home Study. The goal of this study is to evaluate potential mechanisms between toddler sleep patterns and obesity risk (as indexed by elevated adiposity, toddlers stress, and family risk factors). There are three areas of sleep associated with elevated risk for obesity - short sleep duration, high sleep variability, and high levels of sleep fragmentation. This research study aims to examine within the context of toddler stress and familial risk: (1) explore which toddler sleep behaviors are associated with obesity risk, and (2) delineate the concurrent pathways between family sleep-related behaviors, toddler stress and obesity risk.

Jessica Sommerville
Affiliation: University of Toronto
Contact email: jessica.sommerville@utoronto.ca
Planned project: This summer, the Toronto Early Cognition Lab is conducting research exploring adult influences on infant persistence, especially the way adults speak about and model effort. We will collect data in person with children aged 10 to 24 months old as they attempt impossible and/or hard problem-solving tasks. The ICIS fellow will be a critical in processing this data, using video recordings of study sessions to classify infants' problem-solving strategies, particularly trying time, force, and the diversity of infants' exploratory strategies. In doing so, the fellow will collaborate with a vibrant and supportive research team as they work to achieve reliability with fellow behavioural coders. The fellow will also have the opportunity to learn about the research process through the mentorship of senior lab members, conducting relevant literature reviews, and presenting research findings.

Maria Spinelli
Affiliation: University G. D'Annunzio Chieti-Pescara
Contact email: maria.spinelli@unich.it

Planned project: Research on mother-infant interaction. We will conduct analyses of behaviours, physiological functioning and neural activation (with EEG) of both the mother and the infant during the Still-Face procedure from 3 to 10 months fo infant life. We will explore the role of individual maternal and infant factors in affecting the quality of the interaction and the quality of bio-behavioural synchrony. The student will be trained in coding maternal ind infant behaviours, in exploring the associations among behaviours and physiological funtioning (measured with the RSA), and neural activation. Students will also aprticipate to the laboratory activity, collecting new data and applying other observational techniques.

Ashley Thomas
Affiliation: Harvard University
Contact email: athomas@g.harvard.edu
Planned project: Our lab has several ongoing studies concerning infants' understanding of relationships. For example, we are examining (i) how infants think about their own caregivers, (ii) what inferences infants make about people who are in close relationships, and (iii) how infants think about people vs. objects. Our lab uses looking time methods over video calls for these studies. As a fellow, you'll be encouraged to participate in lab meetings, and you'll work closely with a mentor in the lab. You'll gain experience in data collection, analysis, and communication, and we'll work towards having you speak ata lab meeting about the work you've done.

Sandra Vanegas
Affiliation: University of Texas at Austin
Contact email: sandra.vanegas@austin.utexas.edu
Planned project: The Founding Generation Summer Fellow would join the IDEA (Improving Developmental Experiences for Autism and developmental disabilities) Research Lab led by Sandra Vanegas, PhD at the University of Texas Austin. The fellow would work primarily on a new study being launched in collaboration with Megan Flores, PT, PHD, at Baylor University to study early language, communication, and motor development in racially/ethnically diverse infants and toddlers with Down syndrome. The fellow would assist with multiple research components, including recruitment and community outreach, screening of participants, and the assessment of language, communication, and motor development. The fellow would receive training in administration, scoring, and interpretation of these assessment tools, including training on coding videotaped observations. The fellow would have an opportunity to develop a conference presentation based on a research question of interest within the scope of data that is collected as part of the study.

Eric Walle
Affiliation: University of California, Merced
Contact email: ewalle@ucmerced.edu
Planned project: My research broadly focuses on infant and child social and emotional development, as well as the role of developmental transitions (e.g., walking) on psychological functioning. I have

numerous existing observational datasets examining parent-child interactions, parent and child talk about emotions, infant joint attention, and infant language development in home and lab observations.

Jenny Wang
Affiliation: Rutgers University
Contact email: jinjing.jenny.wang@rutgers.edu
Planned project: Students will both lead an independent project on infants' perception of number and how it responds to social and linguistic input, as well as contributing to various projects about the development of number skills in various contexts as a team member. Our lab is currently interested in how numerical cognition interfaces with children's growing understanding of the social world as well as how it's linked to nutrition and health.

Ran Wei
Affiliation: Peking University
Contact email: ranwei@pku.edu.cn
Planned project: I am an Assistant Professor in the Graduate School of Education, Peking University. My interdisciplinary, cross-cultural research agenda centers on understanding how contextual factors shape children's language and executive functioning (EF) development. Situated at the crossroad of developmental psychology, psycholinguistics, cognitive neuroscience, and early childhood education, my research interests gravitate around three core themes. First, my research investigates how the family environment, especially caregivers' communicative input and beliefs, shapes early language acquisition, EF, and the neural architecture supporting these foundational capacities. Second, my research examines how early language and EF development unfolds across diverse societies, cultures, and languages. Third, my ongoing studies aim to create and evaluate culturally authentic interventions aimed at empowering parents from diverse ethnocultural and socio-economic backgrounds. I am looking forward to working with students in China or abroad. Students are encouraged to develop their own project pertaining to the family environment and early development, leveraging my lab's unique resources and datasets to develop new skills and foster their academic and professional growth. Collaboration opportunities with other scholars at Peking University and beyond are available.

Hannah White
Affiliation: University of Missouri-St. Louis
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Planned project: As a member of the UMSL Lifespan Development Lab, students will be exposed to eye-tracking, salivary cortisol, and advanced quantitative methodologies. Current projects include examining the effects of family dynamics (e.g., maternal depression, parental substance use, caregiving team structure) on infant stress and cognitive development.

Fei Xu
Affiliation: UC Berkeley

Contact email: fei_xu@berkeley.edu
Planned project: We have several on-going infant studies that may be of interest: (1) logical reasoning in infants; (2) probabilistic reasoning in infants; (3) revising beliefs about objects infants. I would be very happy to discuss these projects and others with interested students.