16th Annual Social and Affective Neuroscience Society Meeting

The 16th annual meeting of the Social and Affective Neuroscience Society (SANS) took place from April 10th - 14th, 2024 at the Westin Harbour Castle in Toronto, Ontario. Drs. Chelsea Helion (Temple University) and Kalina Michalska (University of California, Riverside) were the co-chairs of the meeting and oversaw a diverse and impressive array of scientific programming under the theme of "the person situated in the greater environment". The thoughtfully planned symposia and featured talks reflected this theme and was facilitated by the content of the talks and speakers, as well as the questions generated by the attendees. Overall, the conference was an outstanding success, with faculty and trainees alike being able to swap ideas and further discuss how social and affective neuroscience has changed and grown over the years.

Conference Introduction and Symposium Talks

The conference had a strong start, with a substantial number of mentors and mentees gathered for a kickoff meeting at 8am on day 1. Despite the early hour, the event was very well attended, and the room was lively and full of enthusiasm as mentors and mentees connected with one another. The energy and spirit around this event set a positive tone for the rest of the conference. This event was coordinated by the Equity, Diversity, Inclusion, and Justice (EDIJ) and Trainee Committees, led by Dr. Jennifer Kubota (University of Delaware) and Hongbo Yu (University of California, Santa Barbara), respectively. Their work was essential to the themes of the conference, with the society as a whole moving towards becoming a more inclusive environment.

The conference itself was split into six symposium talks that spanned a wide range of exciting topics in social and affective neuroscience, namely: intergroup relations, human communication, the neuroscience of narration, how diversity and inclusion can make us better scientists, neural network approaches for social relational representations, and how AI can inform our science in an ethical way. The talks that were scaffolded under these larger symposia discussed different ways to elicit a social and/or affective response, with a large emphasis on more naturalistic approaches. But what exactly are these naturalistic approaches? The society at large is moving towards using naturalistic stimuli that people are likely to have extensive exposure to in their daily lives, such as social media, movies/TV series, or the news, to elicit activation in brain regions and networks of interest. Amongst these areas are the default mode

network, particularly the medial prefrontal cortex and temporoparietal junction portions of the network, as well amygdala; this list is not exhaustive, but representative of subcortical and cortical regions that contribute to uniquely human attributes, such as social connection and emotion regulation.

Award Speakers

In addition to the symposium talks, there were several award and keynote speakers that highlighted noteworthy contributions by social and affective neuroscientists at various career stages. Winning the Early Career Award, which highlights an early-stage researcher, Dr. Justin Minue Kim (Sungkyunkwan University) gave an inspiring and uplifting talk that incorporated a touching anecdote about a homework assignment his daughter had and how he dedicates his work to his trainees. In the presentation Dr. Kim presented findings on microcircuits of the amygdala and how trait-anxious adults had heterogenous white matter tract morphology, indicating how the Anna Karenina Principle (all happy families are happy for the same reasons, while all unhappy families are unhappy in different ways) may be at play when it comes to idiosyncrasies of brain structure and function.

Next, Dr. Luke Chang (Dartmouth College) was the inaugural recipient of the Mid-Career Award. Specifically, Dr. Chang was recognized for his dedication to computational modeling and his efforts in integrating these models into current research. His unconventional background in decision neuroscience and clinical psychology informed these specific methods, and he stated that a goal of his is to integrate computational modeling and thinking into psychology. His work focuses on using these practices to broaden our understanding of human sociality, emotions, and social interactions in natural contexts. He has also cultivated many open training resources in both computational modeling and brain scanning, signifying the important shift of the society towards more open science methods.

The Distinguished Scholar Award is given to a scholar that has made significant advancements in our understanding of the biological basis of social and affective processes (or expanding the core of the discipline) and this year Dr. Mauricio Delgado (Rutgers University-Newark) was the recipient. His work on emotion regulation and decision making, specifically on how positive and negative emotions influence our ability to learn, has paved the way a greater understanding of the nuance of why we socially connect. Notably, his work on using positive social memories as an emotion regulation strategy has shifted perspectives on what successful regulation looks like and opens the floor for future researchers to continue finding better and more fine-tuned ways for humans to regulate their emotions.

Keynote Speakers

The two keynote speakers were Drs. Kristen A. Lindquist (University of North Carolina at Chapel Hill) and Sheena Josselyn (University of Toronto & SickKids), both recognized for their groundbreaking research. Dr. Lindquist's work on "deconstructing" emotions,

or breaking down the neural constructs of emotions, has led to a shift in our understanding and perceptions of how humans experience emotions, specifically focusing on how the body plays a role in affect and that emotions are require more than just the sub-cortical regions of our brain. Her research highlights that emotions can transmit across generations and between groups, and that something like a cultural evolution can happen because it can fit into our cultural niche.

Dr. Josselyn's research focused on continuing the search for the engram (defined as physical substrates of the persistence of memory in the brain), specifically looking at how experiences are represented in a relevant brain region. She is interested in understanding how specific neurons are recruited or allocated to an engram, which she has demonstrated in a mouse population. In one of her studies, she would ask a mouse to recall a memory and found an overlap in CREB neurons and engram neurons when excited; the less excited cells were excluded from an engram, supporting threat memory. In a study where she claimed that mice are particularly motivated by cocaine, she found that the most excitable sub-ensembles are allocated to an engram, highlighting the excitability-dependent allocation occurs in the context of pre-existing functional connectivity. She ended with an emphasis on how science that builds incrementally is beneficial to all, again highlighting another important direction the society is taking when it comes to the best practices of research.

Poster Sessions and Blitz Talks

In addition to the focus on the work seasoned faculty and more senior researchers that have paved the way for social and affective neuroscience research, the meeting also showcased trainees and their already impressive and impactful contributions to the field. This came in the form of poster sessions and 5-minute blitz talks, with the latter featuring outstanding poster presentations. The environment around these sessions and talks was one of learning and understanding, with thoughtful and well-researched summaries of posters given and attentive questions to follow. The content of these varied, with some findings focusing on direct relationships of neural networks and affective constructs (e.g., the role of the hippocampus and amygdala helping you remember alcohol-related activities) and others incorporating additional levels of analysis with broader implications for social behaviors (e.g., neural synchrony predicting future popularity amongst adolescent girls).

Final Thoughts

Overall, the conference was a success, highlighting both scientific innovation and friendly relations amongst faculty, trainees, and staff alike. Aside from the talks and planned events, there were plenty of opportunities for networking and casual conversations, whether scientific in nature or not. This year marked the first year of Comic SANS, hosted and developed by Vishnu "Deepu" Murty (University of Oregon). This gave researchers a chance to share their stand-up comedy skills (loosely defined). This specific event highlighted the fact that, while science is one of the primary motivations for why we gather and connect, we simultaneously recognize the value of

social connection and friendship (we are social and affective neuroscientists, after all). The conference concluded with some general society business, including the society's previous president, Dr. Aaron Heller (University of Miami) passing the torch to incoming president Dr. Ajay Satpute (Northeastern University). Then, as new Program Co-Chairs Dr. Elisa Baek (University of Southern California) and Dr. João Guassi Moreira (University of Wisconsin-Madison) took to the stage, "Chicago" by Frank Sinatra was played over the speakers, signaling the society would reconvene in the Windy City in 2025.

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