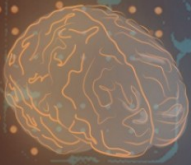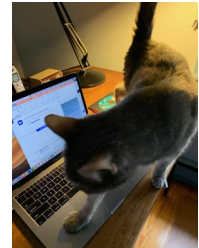# Cognitive Science at Lehigh
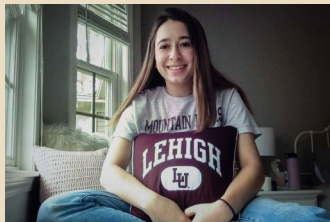## Spring 2020

Director's Corner

I don't have to tell you that this was an unusual semester! Spring break started out normally, with students heading out to have fun or catch up on schoolwork, and faculty looking forward to research time and some relaxation. The first rumblings of global pandemic early in the week felt unreal, but by Thursday we were in a mad scramble to cope with a rapidly evolving new reality. By Monday faculty were testing out new on-line teaching skills and students were logging in to their classes from near and far.

I have to commend the students in my Introduction to Cognitive Science class for staying so engaged even though lectures meant hunching over laptops staring into each other's living spaces. My cats were frequent Zoombombers, but luckily the students didn't seem to mind some furry faces and loud meows in class. Sometimes a peek into each other's real lives just enriches the experience.

Now more then ever, it's good to stay connected. Please join us on social media including Facebook, Instagram, Twitter, and LinkedIn. You can always reach me at barbara.malt@Lehigh.edu

Student Spotlight

Meet **Emma Stein '20**, who just graduated with a major in Cognitive Science and minors in both Computer Science and Mass Communication. Emma somehow managed to do all that and still spend a semester abroad in Barcelona! Emma chose Cognitive Science because she wanted an interdisciplinary major that could be applied to the real world. Emma worked on research with Professor Jia aiming to create a dataset search engine that will assist scientists in locating data for exploratory analysis and testing hypotheses. Her favorite part of the research was being able to learn and work on her own time and having a say in the way her team approached problems. Reflecting on her years at Lehigh, Emma's favorite experience in the Cognitive Science major has been a course on artificial intelligence and machine learning in education. She was able to explore how technology is affecting the education community. Emma is heading off to a job at PwC as a tech consultant in the division of data and analytics.

McKenzie Dominick '22 is a Cognitive Science and Computer Science double major. She was attracted to the major by its flexibility; she likes being able to create her own path within the course requirements. She hopes to ultimately go to a doctoral program in Cognitive Neuroscience, so she's selecting a lot of Neuroscience courses. First, though, she plans on spending some time in Software Engineering to get work experience and pay off student loans. This summer, she's participating in a Lehigh Mountaintop Summer Experience, working on the *Virtual Lives of Vaping* project. The project examines the marketing of vaping in social media, aiming to eventually create workable vaping cessation campaigns. McKenzie enjoys this work because "The program allows me to take my passion for research and be extremely hands on."

News & Events

Congratulations to our 2020 graduates (from top left): Emily Passalaqua, Emma Stein, Larrisa Miller, and Nicola Chomiak. For the first (but maybe not last) time ever, senior project presentations were via Zoom!

Alumni, we need your help! Students really, really want internships in Cognitive Science. PLEASE email me if your company or practice or non-profit, etc. offers a way (paid or unpaid) for undergraduates to gain practical experience in the field. We are compiling a list for the webpage. Email barbara.malt@lehigh.edu

Three of our four research talks this semester were also via Zoom. Although we missed the pizza and cookies, it was great to have audience participation from some folks who would not have been able to come to campus.

Our talks focused on links between people and technology.

Prof. Eric Baumer, CSE: Emphasizing Interpretation in Text Visualization (March 6)

Prof. Rebecca Wang, Marketing: Apps, Search, and Shopping Behavior: Revealing Consumer Insights from Data with Machine Learning and Causal Research (March 30)

Prof Haiyan Jia, Journalism and Communication: How Communication Technology Engages and Empowers its Users (April 17)

Prof Dominic DiFranzo, CSE: Designing for Empathy on Social Media (April 27)

Prof. Dominick DiFranzo, courtesy *Brown and White*

Meet the Faculty

Professor Brandone studied psychology as an undergraduate at Boston College, where she took a course that sparked her interest in cognitive development. The class started her fascination with studies of pre-verbal infants' knowledge, and also with how deceptively simple experimental methods can address fundamental theoretical questions. Currently, she is investigating the mechanisms by which infants build an understanding of other people's intentions and the kinds of experiences that support this process. Professor Brandone is most excited about how interdisciplinary the Lehigh Cognitive Science program is, as it is "refreshing to see how people outside of psychology think about and study questions related to the mind."

Research Roundup

Just some of the recent faculty output!

Allen, J. W. P., Bickhard, M. H. (2018). Stage fright: Internal reflection as a domain general enabling constraint on the emergence of explicit thought. *Cognitive Development, 45*, 77-91. https://doi.org/10.1016/j.cogdev.2017.12.005

Liu, R., Walker, E., Friedman, L., Arrington, C.M., & Solovey, E.T. (2020). fNIRS-based classification of mind-wandering with personalized window selection for multimodal learning interfaces. *J Multimodal User Interfaces*. https://doi.org/10.1007/s12193-020-00325-z

O'Séaghdha, P. G., Hambric, C., Hupbach, A., Heflin, J. (2019, November). *Challenges for theories of semantic interference.* Paper presented at the Annual Meeting of the Psychonomic Society, Montreal.

Zheng, M., Marsh, J. K., Nickerson, J. V., & Kleinberg, S. (2020). How causal information affects decisions. *Cognitive Research: Principles and Implications*, *5*, 1-24. doi: 10.1186/s41235-020-0206-z

Cognitive Science:
The Interdisciplinary
Study of Mind

Cognitive Science Program