

NYU – Graduate School of Arts and Science

PhD in Cognition and Perception

Dear Members of the Selection Committee,

I am fully motivated to pursue a career in academic research in visual attention and perception, and I believe that the Cognition and Perception PhD program at NYU offers the best opportunities to develop the necessary skills for a future researcher in this field.

Since the beginning of my studies, I have been interested in visual perception and the relationship between the physical brain and cognitive processes. As a first step, I became a research assistant in the Corbett-Munneke Visual Perception and Attention Laboratory during my second year of undergraduate study at Bilkent University. During the two years I worked in this lab, I developed core scientific reasoning skills, including expertise in psychophysical, eye-tracking and EEG methodologies, as well as data analysis and interpretation. I assisted with several research projects focused on understanding how the visual system accomplishes stable and complete perception despite limited attentional resources by relying “short-cuts” like perceptual grouping and perceptual averaging. Participating in these projects from the initial stages of developing the ideas to the final stages of seeing the published manuscripts further stimulated my interests in attention and perception research and played a major role in shaping my decision to pursue PhD studies in this field.

To expand my knowledge of cognitive neuroscience, I completed two internships during Summer 2016. At the İstanbul University Aziz Sancar Research Institute of Experimental Medicine, in the Department of Neuroscience, I attended various neuroscience seminars, gave presentations, and gained hands-on experience in molecular neuroscience techniques. During my second internship in Bahçeşehir University’s Brain and Cognition Lab, I became more intimately involved in the development of behavioral studies, and also had an opportunity to expand my knowledge by assisting with EEG projects. I spent Summer 2017 at Koç University, in the Timing and Decision Making Lab, assisting with a tDCS study investigating perceptual decision making. I also programmed and contributed to the experimental design of two different behavioral studies investigating disgust sensitivity and error monitoring.

To broaden my academic and scientific skills in an international environment, I participated in the Erasmus Exchange Program in Fall of 2017 at KU Leuven, Belgium. I became involved in ongoing research in the Gestalt ReVision Laboratory (PI Johan Wagemans), where I gained state-of-the art knowledge of research on perceptual grouping and predictive processing, and collected, visualized, and interpreted data for several related

experiments. The following summer, I attended the York CVR-VISTA Vision Summer School in Canada (full scholarship), where my research interests became more focused on attention and perception after having the chance to learn about cutting-edge research questions and methodologies in vision science.

After returning from my international studies, I began my original senior thesis project under the supervision of Dr. Hulusi Kafalıgönül. The project “Attentional Modulation of Audiovisual Interactions in Apparent Motion,” examines how visuospatial and auditory attention modulate the audiovisual interactions underlying temporal ventriloquism. After developing the paradigm with my supervisor, I applied for Ethics Committee Approval, and designed and programmed the related experiments using MATLAB and Psychtoolbox.

As an undergraduate student, I aimed to take advantage of every chance to improve my theoretical and practical research skills. From my experience in different laboratories, I have learned to program experiments with MATLAB, how to design experiments with different methodologies such as psychophysics, eye tracking, EEG, EMG, and brain stimulation (tDCS), as well as how to analyze and visualize data using MATLAB, R, Excel, and SPSS. I am also familiar with Java (Object Oriented Programming). I am currently taking core mathematics courses offered by the engineering departments to improve my computational skills, as well as an fMRI course to learn more about basics physics and signal processing. I also obtained a FELASA Cat B Certificate for laboratory animal experiments. In addition to my research experience, I also served as a TA for Dr. Jennifer Corbett’s Cognitive Psychology course and for two semesters as a lab TA for Computing and Programming for Social Sciences classes.

Building on my background in neuroscience, perception, and cognition, I hope to continue investigating the role of spatial attention in visual perception and multisensory integration. The NYU PhD Program in Cognition and Perception is the perfect interdisciplinary environment in which to develop my research interests. Prof. Marisa Carrasco’s lab is my first choice for PhD study, as I am excited about several lines of ongoing visual attention research in the lab. I believe the experience I have gained so far has prepared me to contribute to the world-class research environment at NYU, where I will have the best opportunities to further improve myself as a future researcher.

Thank you very much for considering my application.

Sincerely,

Aysun Duyar