

**The Auditory Cognitive Neuroscience Lab** is part of the SLHS department. We study how brain mechanisms for speech and language develop in children during school years. We are especially interested in neural differences between children with typical development and children who have what is called the developmental language disorder (DLD). DLD affects about 7% of children but is much less studied and less understood than autism, which affects about 1% of children. We use a non-invasive method called electroencephalography to collect brain's electrical signals from the scalp while children are engaged in different tasks. Most children coming to the lab are 8-12 years of age. Currently, we are conducting several experiments on audiovisual speech perception in children. Because we almost always see a talker's face when we hear speech, we learn to combine auditory and visual speech cues when we listen to speech. In fact even infants can do some of it! We found that children with DLD struggle to combine visual and auditory information. We are trying to understand the underlying cause and how it influences more general language development.

Undergraduate students are an integral part of our lab. We cannot conduct research without them. At a minimum, students learn how to administer hearing and visual screenings, a test of non-verbal intelligence, and how to prepare equipment and assist during a brain recording session. Students interact with children during recordings to keep them on track and comfortable. Depending on individual skills and desires, students can also learn to score standardized tests of language (we use the Test of Integrated Language and Literacy Skills), non-verbal intelligence scores, and process brain recording data. You can even consider doing an honor's project in the lab!

Because of the amount of training involved, students are expected to commit to 2 years of lab participation. During regular semesters, students register for SLHS 498. If students are available to help during summer (many kids are out of school and we have more sessions per week!), students are paid \$12/hour.

To qualify students must be:

- Currently a sophomore or a very self-motivated freshman,
- Have a high GPA – at least 3.7,
- Be eager to learn new things about research,
- Have excellent time-management skills,
- Like to work with school-aged children,
- Can commit to 9 hours/week (3 credits) per semester for 4 semesters,
- Work well as part of a group.

If you are interested or would like to learn more, please contact me directly: Dr. Natalya Kaganovich, [kaganovi@purdue.edu](mailto:kaganovi@purdue.edu). Attach your current CV.