

Will Decker

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Last Update: September 19, 2023

EDUCATION

Louisiana State University (LSU)

Bachelor of Science, Psychology

Minor: German

GPA: 3.8/4.0

Thesis: The Spatio-temporal Architecture of Auditory Statistical Learning

Baton Rouge, Louisiana, USA

Aug. 2020 - May 2024

RESEARCH EXPERIENCE

Representations and Learning Lab

Honors thesis student

Department of Psychology, Louisiana State University

PI: Christopher R. Cox, PhD

- Develop clear research questions and hypotheses through self-lead literature reviews.
- Design and complete undergraduate honors thesis from start to finish using advanced neuro-scientific techniques (neuroimaging and computational), critical scientific thinking and writing.
- Learn and apply mathematical/statistical concepts/models from cognitive neuroscience.
- MRI safety trained.

Baton Rouge, Louisiana, USA

Dec. 2022 - Present

Language, Environment and NeuroDevelopment (LEND) Lab

Project Coordinator

Department of Communication Sciences and Disorders, Louisiana State University

PI: Julie M. Schneider, PhD

- Create, execute and lead studies ranging in scientific topics that use EEG.
- Oversee team of undergraduate students learning and using EEG.
- Develop and implement analyses protocol and pipeline for EEG and functional magnetic resonance imaging (fMRI).
- Present research at internal, undergraduate and national level conferences and symposia.

Baton Rouge, Louisiana, USA

May 2022 - Present

Language, Environment and NeuroDevelopment (LEND) Lab

Research Assistant

Department of Communication Sciences and Disorders, Louisiana State University

PI: Julie M. Schneider, PhD

- Administer language assessments (TOPEL, PPVT, DELV) to children between the ages of 3-5 years.
- Run participants taking part in behavioral language research.
- Code language transcriptions using Systematic Analysis of Language Transcripts (SALT)
- Build/set up EEG system and protocol from start to finish.

Baton Rouge, Louisiana, USA

Sep. 2021 - May 2022

PUBLICATIONS

Submitted

1. Fan, T., **Decker, W.**, Schneider, J. M. (2023). The domain-general neural basis of auditory statistical learning in children. *Neurobiology of Language*.

In progress

1. **Decker, W.**, Schneider, J. M. (registered report). When Reducing Noise in Developmental EEG Data, Is EEG Best Left Alone?

PRESENTATIONS*

*Denotes equal contribution

16. **Decker, W.**, Schneider, J. M., Cox, C. (2023, October). The architecture of auditory statistical learning in the brain: a dynamical functional connectivity study. **Poster** presented at the Society for the Neurobiology of Language's annual meeting. Marseille, France.
15. **Decker, W.**, Schneider, J. M. (2023, September). Is EEG really better left alone for developmental datasets. **Poster** presented at the annual meeting of the Society for Psychophysiological Research (SPR). New Orleans, Louisiana, USA.
14. **Decker, W.**, Schneider, J. M. (2023, July). Neural signal processing for developmental data. **Lightning talk** presented at the annual LSU Summer Undergraduate Research Forum (SURF). Baton Rouge, Louisiana, USA.
13. **Decker, W.**, Schneider, J. M. (2023, July). Is EEG really better left alone for developmental datasets. **Poster** presented at the annual LSU Summer Undergraduate Research Forum (SURF). Baton Rouge, Louisiana, USA.
12. **Decker, W.** (2023, April). Using neuroimaging to examine statistical learning. **Invited internal talk**. Louisiana State University, Baton Rouge, Louisiana, USA.
11. Carter, M.*, **Decker, W.***, Ferdaus, R.*, George, K.*, McDonald, J., Rivers, A.*, Shoulders, B.* (2023, April). Effects of note-taking methods on learning. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
10. Forest, M., Lopez, S., **Decker, W.**, Schneider, J. M. (2023, April). The role of vocabulary knowledge in linguistic encoding of motion events: an ERP study. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
9. Riley, W., **Decker, W.**, Haebig, E., Schneider, J. M. (2023, April). Learning novelties: the effects of rhyme, vocabulary, and processing speed on novel word learning in adults. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA.
8. **Decker, W.** (2023, April). A pipeline for developmental EEG data: an introduction. **Invited internal talk**. Louisiana State University. Baton Rouge, Louisiana, USA.
7. **Decker, W.**, Fan, T., Haebig, E., Schneider, J. M. (2023, March). Neural mechanisms of novel word learning through rhyme in adults. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
6. Lopez, S.L., Forest, M. L., **Decker, W.**, Schneider, J. M. (2023, March). The influence of native language on motion event encoding: an ERP study. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
5. Fan, T., **Decker, W.**, Schneider, J. M. (March 2023). Domain-specific neural profiles of statistical learning of speech and tone in young children. **Poster** presented at the Cognitive Neuroscience Society's Annual Meeting. San Francisco, California, USA.
4. **Decker, W.**, Haebig, E., Schneider, J. M. (2022, November). Anxiety and Word Learning in College Students. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA. DOI:<https://osf.io/GNM8J>
3. Forest, M., Lopez, S., **Decker, W.**, Schneider, J. M. (2022, November). The influence of grammar on perception of repeated motion events. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA.
2. Wyble, A., **Decker, W.**, Haebig, E., Schneider, J.M. (2022, November). Rhyme and reason: the effects of rhyme on retrieval from semantic memory. **Poster** presented at the annual University of Louisiana at Lafayette Undergraduate Research Conference. Lafayette, Louisiana, USA.
1. **Decker, W.**, Schneider, J.M. (2022, April). Choosing an EEG system: evaluating the pros and cons and quality of data among two different capping approaches. **Poster** presented at the annual Louisiana State University Discover Day Research Symposium. Baton Rouge, Louisiana, USA. DOI:<https://osf.io/6W4JF>

HONORS AND AWARDS

Distinguished Undergraduate Research Candidate
LSU Discover Undergraduate Research Program, Louisiana State University

LSU Discover Travel Award
LSU Discover Undergraduate Research Program, Louisiana State University

Baton Rouge, Louisiana, USA
May 2024

Baton Rouge, Louisiana, USA
Oct. 2023

FUNDING

LSU Discover Undergraduate Summer Research Grant

Baton Rouge, Louisiana, USA

LSU Discover Undergraduate Research Program, Louisiana State University

May 2023 - Aug. 2023

Project title: A Universal Preprocessing-Pipeline for Event-Related Potentials (ERPs) in Developmental

Electroencephalography (EEG) Research.

Amount: \$3,000

MEMBERSHIPS AND AFFILIATIONS

Society for Psychophysiological Research

Student Member

Sep. 2023 - Present

Society for the Neurobiology of Language

Student Member

May 2023 - Present

Cognitive Neuroscience Society

Undergraduate Student Member

Dec. 2022 - Present

SKILLS AND OTHER

Language: English (native), German (C1)

Programming: MATLAB, Python, R, \LaTeX , bash, **git**

OPEN SCIENCE

 **GitHub**

 **ORCID**

 **Open Science Framework**