# Kathryn Schuler

# kschuler@sas.upenn.edu August 2024

#### **Positions and Education**

2017-present Assistant Professor, Department of Linguistics, University of Pennsylvania

2017 Ph.D., Neuroscience, Georgetown University

2010 B.A., Brain and Cognitive Sciences, University of Rochester

Grants

2024-2025 University Research Foundation Award

Probability matching as generalization

Award: \$32,423

Role: Primary Investigator with Co-PI Charles Yang

2023-2024 NSF Doctoral Dissertation Research Improvement Grant

The role of input reliability and shared variability on the acquisition of linguistic variation

Award: \$10,876

Role: Primary Investigator with Co-PI Yiran Chen

2022-2024 MindCORE Collaborative Research Award

Sociolinguistic variation in the developing mental lexicon

Award: \$67,061

Role: Primary Investigator with Co-PIs David Embick and Meredith Tamminga

2021-2024 National Science Foundation Grant

Acquisition of variation in child language learners (BCS-2043724)

Award: \$192,227

Role: Primary Investigator

2021-2022 Penn Research Recovery Grant

Online recruitment and running of child research participants

Award: \$12,190

Role: Primary Investigator

**Awards** 

2017	Paula Menyuk Travel Award, Boston University Conference on Language Development
2016	Robert J. Glushko & Pamela Samuelson Foundation Travel, Cognitive Science Society
2012	Cognitive Science Fellowship (declined), Northwestern University
2002	New York Leaders of Tomorrow Scholarship, New York State Lottery
2002-2004	Salutatorian Scholarship, Elmira College

#### Manuscripts submitted

- 1. Schuler, K.D., Yang, C., & Newport, E.L. (in revision) Children form productive rules when it is more computationally efficient. *Journal of Memory and Language*
- 2. Schuler, K.D., Lukens, K., Reeder, P.A., Newport, E.L. & Aslin, R.N. (under review) Children can use distributional cues to acquire grammatical categories. *Journal of Cognition and Development*

### **Peer-reviewed Papers**

- 3. Chen, Y.\*\* & Schuler, K.D. (2024) French Variable Ne-omission in Child-Directed Speech and Children's Early Productions. Language Learning and Development
- 4. Li, D\*\* & Schuler, K.D. (2024) Children can use distributional cues to acquire recursive structures. *Proceedings of the 46th annual conference of the Cognitive Science Society.*
- 5. Li, D.\*\* & Schuler. K.D. (2023) Acquiring recursive structures through distributional learning. Language Acquisition Awarded best paper by untenured faculty
- 6. Fama, M.E., Schuler, K.D., Newport, E.L., & Turkeltaub, P.E. (2022) Impacts of healthy aging and left hemisphere stroke on statistical language learning. *Language Cognition and Neuroscience*
- 7. Austin, A.\*, Schuler, K.D.\*, Furlong, S. & Newport, E.L. (2021) Learning a language from inconsistent input: Regularization in child and adult learners. *Language Learning and Development*
- 8. Schuler, K. D., Kodner, J., & Caplan, S. (2020). Abstractions are good for brains and machines: A commentary on Ambridge (2020). *First Language*
- 9. Culbertson, J.C. & Schuler, K.D. (2019). Artificial language learning in children. *Annual Review of Linguistics*.
- 10. Schuler, K.D., Reeder, P.A., Newport, E.L., & Aslin, R.N. (2017) The effect of Zipfian frequency variations on category formation in adult artificial language learning. *Language Learning and Development.*
- 11. Schuler, K.D., Yang, C. & Newport, E.L. (2016). Testing the Tolerance Principle: Children form productive rules when it is more computationally efficient to do so. In Papafragou, A., Grodner, D., Mirman, D., & Trueswell, J.C. (Eds.) *Proceedings of the 38th annual meeting of the Cognitive Science Society.*
- 12. Schwab, J.F., Schuler, K.D., Stillman, C.M., Newport, E.L. Howard, J.H., & Howard, D.V. (2016) Aging and the Statistical Learning of Grammatical Form Classes. *Psychology and Aging*, 2016, 31, 481-487.
- 13. Booth, A.E., Schuler, K., & Zajicek, R. (2010). Specifying the role of function in infant categorization. *Infant Behavior and Development*, 33(4), 672-684.

<sup>\*</sup> co-first authors, \*\* trainee coauthor

# **Conference Proceedings Papers**

- 14. Chen. Y.\*\* & Schuler, K. (2023) Variable ne in the negative utterances of French children and their caregivers. BUCLD 47 Proceedings
- 15. Li, D.\*\* & Schuler, K. (2023) Distributional learning of recursive structures: the role of the structural representation. *BUCLD 47 Proceedings*
- 16. Li, D..\*\* & Schuler, K. (2023) Adapting infant looking time paradigms for the web. BUCLD 47 Proceedings
- 17. Chen. Y.\*\* & Schuler, K. (2022) Adults regularize unpredictable variation when variants resemble possible speech errors. *Proceedings of the Linguistic Society of America*
- 18. Li, D.\*\* & Schuler, K. (2021) Distributional Learning of Recursive Structures Proceedings of the 43rd Annual meeting of the Cognitive Science Society
- 19. Pophristic, S.\*\* & Schuler, K.D. (2021) The role of gender in the acquisition of the Serbian case system. *Proceedings of the Linguistic Society of America*, 6(1), 896–905.
- 20. Chen, Y.\*\* & Schuler, K.D. (2020) Does Learner's preference match the typological pattern of Animacy Hierarchy in morphological marking? *Penn Working Papers in Linguistics*.

#### Software

21. Schuler, K.D. (2021) Exbuilder: a framework for doing reproducible research with docker containers. Available at: https://github.com/exbuilder/exbuilder

#### **Invited Talks**

2024	Integrative Language Science and Technology Seminar, University of Pennsylvania.
2023	Department of Linguistics Colloquium, Stony Brook University
2022	Speech-Language-Hearing Sciences Colloquium, City University of New York
2022	Keynote at the child learners in syntactic change workshop, DiGS 23 (canceled)
2021	Keynote at the Edinburgh Virtual Workshop in Artificial Language Learning
2021	Workshop tutorial at the Edinburgh Virtual Workshop in Artificial Language Learning
2021	Penn Linguistic Conference panel moderator
2020	Cognitive Neuroscience Seminar, George Washington University
2020	Keynote at the Edinburgh Summer School in Artificial Language Learning (canceled)
2019	Department of Linguistics Colloquium, NYU
2018	Integrated Language Science and Technology Seminar, Penn
2018	Center for Autism Research Science Meeting, CHOP
2016	Common Ground Seminar, Institute for Research on Cognitive Science

<sup>\*\*</sup> trainee coauthor

#### **Conference Presentations**

- 1. Li., D.\*\* & Schuler, K. (2024) Children can use distributional cues to acquire recursive structures. *Poster presented at the 46th annual conference of the cognitive science society.*
- 2. Schuler, K. & Chen, Y.\*\* (2023) Children's regularization increases when variation resembles speech errors. *BUCLD* 2023.
- 3. Li, D.\*\* & Schuler, K. (2023) Distributional learning of recursive structures: The role of the structural representation. *Poster presented at 45th annual conference of the cognitive science society*
- 4. Li, D.\*\* & Schuler, K. (2023) Distributional learning of recursive structures: The role of the structural representation. *Poster presented at HSP 2023*
- 5. Li, D.\*\* & Schuler, K. (2022) Distributional learning of recursive structures: The role of the structural representation. *Poster presented at BUCLD 2022*
- 6. Li, D.\*\*, Zhong, S.\*\* & Schuler, K. (2022) Adapting infant looking time paradigms for the web. *Talk* presented at BUCLD 2022
- 7. Chen, Y.\*\* & Schuler, K. (2022) Variable ne-omission in French children's input and production. *Poster presented at BUCLD 2022*
- 8. Li, D.\*\*, Zhong, S.\*\* & Schuler, K. (2022) Adapting infant looking time paradigms for the web. *Talk* presented at ICIS 2022.
- 9. Li, D.\*\*, Zhong, S.\*\* & Schuler, K. (2022) Adapting infant looking time paradigms for the web. *Poster presented at HSP 2022*.
- 10. Li, D.\*\* & Schuler, K. (2022) Acquiring recursive structures through distributional learning. *Talk presented* at the LSA 2022.
- 11. Chen. Y.\*\*, Altenhof, A.\*\*, Kendrick, A.\*\* & Schuler, K. (2022) Adults regularize unpredictable variation when variants resemble possible speech errors. *Talk presented at the LSA 2022*
- 12. Chen, Y.\*\* & Schuler, K. (2021) The Acquisition of Variable Ne-omission in Parisian French. *Talk presented* at the Arizona Linguistics Circle 15
- 13. Chen, Y.\*\* & Schuler, K. (2021) The role of shared variation on the acquisition of variable rules. *Talk* presented at the Boston University Conference on Language Development
- 14. Chen, Y.\*\* & Schuler, K. (2021) The role of shared variation on the acquisition of variable rules. *Talk* presented at New Ways of Analyzing Variation 49
- 15. Li, D.\*\* & Schuler, K. (2021) Acquiring recursive structures through distributional learning. *Talk presented at Recursion Across Languages. The intricacies of Babel*
- 16. Alberski, A.\*\* & Schuler, K. (2021) The role of language context in the acquisition of novel words. *Poster presented at CUNY 2021*

- 17. Li, D.\*\* & Schuler, K. (2021) Acquiring recursive structures through distributional learning. *Talk presented* at CUNY 2021
- 18. Alberski, A.\*\* & Schuler, K. (2021) Learning words in linguistic contexts: using language to fast-map and acquire partial knowledge. *Poster presented at SRCD 2021*
- 19. Kendrick, A.\*\* & Schuler, K. (2021) Adults do not regularize unpredictable language variation, even when learning from an unreliable speaker. *Talk presented at the 95th annual meeting of the Linguistic Society of America.*
- 20. Nam, S.\*\* & Schuler, K. (2021) The influence of verb information on learning novel words. *Poster presented* at the 95th annual meeting of the Linguistic Society of America
- 21. Pophristic, S.N.\*\* & Schuler, K. (2021) The role of gender in the acquisition of the serbian case system. *Poster presented at the 95th annual meeting of the Linguistic Society of America.*
- 22. Schuler, K. & Chen, Y.\*\* (2021) Morphosyntactic variation is preserved, not regularized, when an optional form is rare. *Talk presented at the 95th annual meeting of the Linguistic Society of America*.
- 23. Schuler, K. (2020) Children and adults condition variable rules on social context. Poster presented at the 45th annual Boston University Conference on Language Development. Boston, MA
- 24. Chen, Y.\*\* & Schuler, K.D. (2020) Is an animate-marking rule easier to acquire than an inanimate-marking rule? Poster at the 15th annual Congress of the International Association for the Study of Child Language.

  Canceled due to COVID-19
- 25. Schuler, K.D. & Chen, Y.\*\* (2020) Morphosyntactic variation is preserved, not regularized, when an optional form is rare. *Talk at the Workshop on the Evolution of Morphological Systems, Evolution of Language International Conferences.* Canceled due to COVID-19.
- 26. Chen, Y.\*\* & Schuler, K.D. (2020) Does Learner's preference match the typological pattern of Animacy Hierarchy in morphological marking? *Talk at the 44th annual Penn Linguistics Conference*. Canceled due to COVID-19
- 27. Irani, A.\*\* & Schuler, K.D (2019) Children can acquire verb argument structure with sufficient positive evidence. Poster presented at the 44th annual Boston University Conference on Language Development. Boston, MA
- 28. Schuler, K.D., Horowitz, J.E., Yang, C., Newport, E.L. (2017) The threshold for regularization: When children will and will not regularize inconsistent language input. *Talk presented at the 41st annual Boston University Conference on Language Development*. Boston, MA
- 29. Schuler, K.D., Horowitz, J.E., Yang, C., Newport, E.L. (2017) The threshold for regularization: When children will and will not regularize inconsistent language input. *Poster presented at the 10th biennial meeting of the Cognitive Development Society*.
- 30. Schuler, K.D., Fama, M.E., Turkeltaub, P.E., & Newport, E.L. (2017) The time-course of statistical learning in patients with left hemisphere stroke. *Poster presented at the 9th annual meeting of the Society for the Neurobiology of Language.*

- 31. Schuler, K.D., Horowitz, J.E., Yang, C., Newport, E.L. (2017) The Sufficiency Principle: Predicting when children will regularize inconsistent language variation. Poster presented at the 39th annual meeting of the Cognitive Science Society.
- 32. Schuler, K.D., Yang, C. & Newport, E.L (2016) Children form productive rules when it is more computationally efficient to do so. Poster presented at the Boston University Conference on Language Development, Boston, MA
- 33. Schuler, K.D., Davis, J., Yang, C., Newport, E.L. (2015) Testing the tolerance principle for rule productivity in an artificial grammar. Poster presented at the 9th Biennial Meeting of the Cognitive Development Society. Columbus, OH
- 34. Fama, M.E., Schuler, K.D., Spiegel, K.A., Lacey, E.H., Newport, E.L., & Turkeltaub, P.E. (2015) The effects of healthy aging and left hemisphere stroke on statistical language learning. Poster presented at the Society for the Neurobiology of Language Conference. Chicago, IL
- 35. Schuler, K.D., Aslin, R.N., Newport, E.L. (2015) The time-course of statistical learning across development: Word segmentation and syntax in a serial reaction time task. Poster presented at the Boston University Conference on Language Development. Boston, MA
- 36. Fama, M.E., Schuler, K.D., Spiegel, K.A., Lacey, E.H., Newport, E.L., & Turkeltaub, P.E. (2015) The effects of healthy aging and left hemisphere stroke on statistical language learning. Poster presented at Georgetown Student Research Day. Washington, DC.
- 37. Schuler, K.D., Newport, E.L. (2015) Using growth curve analysis to model the time-course of learning in serial reaction time tasks. Poster presented at Georgetown Student Research Day. Washington, DC.
- 38. Booth, A.E., Zajcek, R.L. & Schuler, K.D. (2010) How does function facilitate early categorization? Not by enhancing attention alone. Poster presented at the International Conference on Infant Studies.

## **Teaching**

2021-present	LING 172 / PSYC 215: Data science for studying language & the mind (most falls)
2020	LING 001: Introduction to Linguistics (occasional springs)
2019-present	LING 304 / 504: Neurolinguistics (most falls)
2018-2020	LING 104: Language and the brain (occasional falls)
2018-present	LING 607: Topics in Psycholinguistics (most springs)
2018	LING 507: Principles of Experiment Design
2015-2016	ICOS 202: Research Modules in Cognitive Science, TA, Georgetown University
2015	ICOS 201: Introduction to Cognitive Science, TA, Georgetown University

<sup>\*\*</sup> trainee coauthor

## Mentoring

PhD Students

Christine Soh, co-advisor, 2023-present
Daoxin Li, co-advisor, 2019-present
Yiran Chen, primary advisor, 2018-present

Committees

Dissertations: Urgucan Vurgun, June Choe, Yiran Chen, Ollie Sayeed, Yosiane White, Sigríður Björnsdóttir (external member), Hong Zhang, Nattanun Chanchaochai, and Ava Irani

Dissertation proposals & qualifying papers: Christine Soh, June Choe, Urgucan Vurgun, Daoxin Li, Aini Li, Yiran Chen, Ryan Budnick, Yosiane White, Spencer Caplan, Hong Zhang, Ava Creemers, Ava Irani, Nattanun Chanchaochai, Ollie Sayeed, Nikita Bezrukov and Andrea Ceolin.

Masters theses: Karen Li

Honors theses: Iris Zhong (external member), Sarah Nam, Jessie Schwab, and John Davis

Independent studies: Esther Werbach, Daoxin Li, Gwen Hildebrandt, Ollie Sayeed, Nikita Bezrukov, Anna Alberski, and Sarah Nam

Lab Managers

Madison Paron, Alessandra Pintado-Urbanc, Ariel Mathis, and Lauren Krawczyk

Undergraduates

Esther Werbach, Izabela Baran, Zaid Tabaza, Mia Schwartzberg, Milana Korobko, Nina Wang, Abby Ray, Lauren Kim, Cynthia Gu, Amy Krimm, Tula Childs, Katarina Siggelkow, Aja Altenhof, Anna Alberski, Iris Zhong, Annalise Kendrick, Stefan Pophristic, Madison Paron, Nathaniel Serio, Breasia Scott, Dorina Domi, Ayyah Alhuraibi, Jasmine Raj, Madison Connelly, and Jessica Burke

#### Service

2024	Graduate admissions committee, Linguistics Department, Penn
2024	Annual Meeting of the Cognitive Science Society, Program Committee
2024	Natural Science and Math Panel, Committee member, Penn
2023	SAS Teaching Awards, Committee member, Penn
2023	Annual Meeting of the Cognitive Science Society, Program Committee
2023	Natural Science and Math Panel, Committee member, Penn
2022	Graduate admissions committee, Linguistics Department, Penn

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2021	University Scholars selection committee, Penn
2021	SAS's New Faculty Orientation, panel discussion on teaching, Penn
2021	Organizing committee, CUNY sentence processing conference
2020-2022	University Scholars faculty council member and research advisor, Penn
2019-2020	Faculty facilitator, Owning your own educational story at Penn (first-gen initiative)
2019-2021	mindCORE education committee, Penn
2019	Graduate admission committee, Linguistics Department
2018	Faculty fulbright committee, Penn
2018	Organizer and instructor, 4-day PsychoPy bootcamp
2015	Organizer and instructions, MATLAB tutorial, Georgetown
2012-2014	Organizer, Functional and Neuroanatomical Imaging Group journal club, Georgetown
Reviewing	Grants: European Science Foundation, National Science Foundation
	Books: Cambridge University Press

Journals: Nature Reviews Psychology, Bulletin Vals-Asla, Linguistics Vanguard, Language, Memory and Cognition, Language Learning and Development, Cognitive Science, Cognition, Journal of Memory and Language, Language Acquisition, and Language Learning

Conferences: NELS, Linguistic Society of America, Annual Meeting of the Cognitive Science Society, Boston University Conference on Language Development, Penn Linguistics Conference, Experiments in Linguistic Meaning, CUNY Sentence Processing

Conference

Memberships International Congress of Infant Studies, Cognitive Development Society, Cognitive

Science Society, Society for Research on Child Development, Linguistic Society of

America

#### Outreach

Related to first-generation and underrepresented scholars

2024	AAC&U TIDES Institute, faculty attendee
2024	PennCAP Faculty Friday, faculty guest speaker
2023	mindCORE NSF Research Experience for Undergraduates, faculty mentor
2023	Middle School Linguistics Summer Camp, faculty director
2021	mindCORE NSF Research Experience for Undergraduates, faculty mentor
2021	mindCORE NSF Research Experience for Undergraduates, workshop instructor
2021	Penn First Plus, Ambassador Training

2020	Penn First Plus, Work study and research information session panelist
2020	MindCORE Interdisciplinary faculty Q&A, panelist
2019	MindCORE Working in research and academia, faculty panel for undergrads
2019	Preparing for your first year as a faculty member or postdoc, faculty panelist
2019	Penn First Plus, working in research faculty panelist
2019	Penn's First Two Years Program, faculty panelist on women in science
2018-2019	Penn's Summer Workshop in Interdisciplinary Mind and Brain Studies
2018	Penn Undergraduate Research Mentoring Program (PURM), faculty mentor
2018	Career development workshop at Penn, faculty speaker
2018	Center for Teaching and Learning graduate student workshop, faculty speaker

# Other public-facing materials and community events

2021-present	Stories in many languages, lab outreach project, https://www.childlanglab.com/outreach
2020	Growing up in science talk, https://mindcore.sas.upenn.edu/behind-the-cv/
2019	Science Cafe talk, Philadelphia, PA

2018-present Language and the brain blog, http://languageandthebrain.org 2014-2016 Science fair judge, Key elementary school, Washington, DC

2014 Group guide, Brain awareness week, Hardy middle school, Washington, DC