DAKOTAH LAMBERT

https://dakotahlambert.com ✉ dakotahlambert@acm.org

Teaching

2024–	Visiting Assistant Professor, Department of Computer Science, Haverford College.
	• Discrete Mathematics
	• Principles of Computing Systems
Fall 2023	Instructor, Université Jean Monnet, Erasmus Mundus Joint Masters: PSRS.
	• Algorithmic and Programming
Summer 2021	Instructor, Department of Linguistics, Stony Brook University
2019–2021	Teaching Assistant, Department of Linguistics, Stony Brook University
	• Phonology
	• Phonetics
	• Language and Technology

Journal Articles

[4] Sam van der Poel, Dakotah Lambert, Kalina Kostyszyn, Tiantian Gao, Rahul Verma, Derek Andersen, Joanne Chau, Emily Peterson, Cody St. Clair, Paul Fodor, Chihiro Shibata, and Jeffrey Heinz. MLRegTest: A benchmark for the machine learning of regular languages. *Journal of Machine Learning Research*, 25(283):1–45, August 2024.

[3] Dakotah Lambert. Relativized adjacency. *Journal of Logic, Language and Information*, 32(4):707–731, October 2023.

[2] Dakotah Lambert, Jonathan Rawski, and Jeffrey Heinz. Typology emerges from simplicity in representations and learning. *Journal of Language Modelling*, 9(1):151–194, August 2021.

[1] James Rogers and Dakotah Lambert. Extracting Subregular constraints from Regular stringsets. *Journal of Language Modelling*, 7(2):143–176, September 2019.

Peer-Reviewed Conference Proceedings

[12] Dakotah Lambert and Jeffrey Heinz. Algebraic reanalysis of phonological processes described as output-oriented. In *Proceedings of the Society for Computation in Linguistics*, volume 7, pages 129–138, Irvine, California, June 2024.

[11] Dakotah Lambert. System description: A theorem-prover for subregular systems: The Language Toolkit and its interpreter, plebby. In Jeremy Gibbons and Dale Miller, editors, *Functional and Logic Programming: 17th Annual Symposium, FLOPS 2024*, volume 14659 of *Lecture Notes in Computer Science*, pages 311–328, Kumamoto, Japan, May 2024. Springer, Singapore.

[10] Philip Kaelbling, Dakotah Lambert, and Jeffrey Heinz. Robust identification in the limit from incomplete positive data. In Henning Fernau and Klaus Jansen, editors, *Fundamentals of Computation Theory: 24th International Symposium, FCT 2023*, volume 14292 of *Lecture Notes in Computer Science*, pages 276–290. Springer, Cham, September 2023.

[9] Rémi Eyraud, Dakotah Lambert, Badr Tahri Joutei, Aidar Gaffarov, Mathias Cabanne, Jeffrey Heinz, and Chihiro Shibata. TAYSIR competition: Transformer+RNN: Algorithms to yield simple and interpretable representations. In *Proceedings of the 16th edition of the International Conference on Grammatical Inference*, volume 217 of *Proceedings of Machine Learning Research*, pages 275–290, 2023.

[8] Dakotah Lambert and Jeffrey Heinz. An algebraic characterization of total input strictly local functions. In *Proceedings of the Society for Computation in Linguistics*, volume 6, pages 25–34, Amherst, Massachusetts, June 2023.

[7] Dakotah Lambert. Grammar interpretations and learning TSL online. In *Proceedings of the Fifteenth International Conference on Grammatical Inference*, volume 153 of *Proceedings of Machine Learning Research*, pages 81–91, August 2021.

[6] Dakotah Lambert and James Rogers. Tier-based strictly local stringsets: Perspectives from model and automata theory. In *Proceedings of the Society for Computation in Linguistics*, volume 3, pages 330–337, New Orleans, Louisiana, 2020.

[5] James Rogers and Dakotah Lambert. Some classes of sets of structures definable without quantifiers. In *Proceedings of the 16th Meeting on the Mathematics of Language*, pages 63–77, Toronto, Canada, July 2019. Association for Computational Linguistics.

[4] Dakotah Lambert and James Rogers. A logical and computational methodology for exploring systems of phonotactic constraints. In *Proceedings of the Society for Computation in Linguistics*, volume 2, pages 247–256, New York City, New York, 2019.

[3] James Rogers and Dakotah Lambert. Extracting forbidden factors from Regular stringsets. In *Proceedings of the 15th Meeting on the Mathematics of Language*, pages 36–46, London, UK, 2017. Association for Computational Linguistics.

[2] Dakotah Lambert, Margaret Fero, Andrew Dai, and James Rogers. A workbench for logically definable stringsets. In *Proceedings of the 2014 Midstates Conference for Undergraduate Research in Computer Science and Mathematics*, pages 47–52, Wooster, Ohio, November 2014.

[1] James Rogers, Jeffrey Heinz, Margaret Fero, Jeremy Hurst, Dakotah Lambert, and Sean Wibel. Cognitive and sub-regular complexity. In Glyn Morrill and Mark-Jan Nederhof, editors, *Formal Grammar: 17th and 18th International Conferences FG 2012 Opole, Poland, August 2012, Revised Selected Papers and FG 2013 Düsseldorf, Germany, August 2013, Proceedings*, volume 8036 of *Lecture Notes in Computer Science*, pages 90–108. Springer-Verlag, 2013.

Talks

[3] Dakotah Lambert. Abstract algebra and the subregular hierarchy. The Rutgers 2024 Subregular Phonology Workshop. New Brunswick, New Jersey. September 27–29, 2024.

[2] Dakotah Lambert. Algebraic analyses of phonology. Workshop on Algebraic Models of Generative Linguistics. Merkin Center for Pure and Applied Mathematics. March 8–10, 2024.

[1] Dakotah Lambert. Constraint-driven analysis of formal languages. Automata Seminar, Institut de Recherch en Informatique Fondamentale (IRIF). February 16, 2024.

Other Writings

[2] Dakotah Lambert. *Essentials of Data Structures & Algorithms*. [Book manuscript].

[1] Dakotah Lambert. *Unifying Classification Schemes for Languages and Processes with Attention to Locality and Relativizations Thereof*. PhD thesis, Stony Brook University, May 2022.

Other Research Experience

2022–	Post-doctoral researcher at the Department of Computer Science at the Université Jean Monnet, France
2020–2021	Parsing Protein Chains: Leveraging computational linguistics for faster protein folding (IACS seed-funding grant to Jeff Heinz, Ken Dill, and Thomas Graf)

Education

Ph.D. Stony Brook University, 2019–2022
    Department of Linguistics and
    Institute for Advanced Computational Science

B.A. Earlham College, 2011–2015
- Computer Science with Honors
- Mathematics with Honors
- College Honors and Phi Beta Kappa

Honors & Awards

2023	Finalist for the E.W. Beth Dissertation Prize
2021–2022	Institute for Advanced Computational Science Junior Researcher Award
2019–2021	Institute for Advanced Computational Science New Recruit Award
2011–2015	Earlham College Presidential Award