

# C.M. DOWNEY

Assistant Professor

Department of Linguistics · Goergen Institute for Data Science & AI  
University of Rochester

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## EDUCATION

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### **University of Washington**

2018–2024

**Ph.D.** Computational Linguistics

Advisors: Gina-Anne Levow and Shane Steinert-Threlkeld

M.S. Computational Linguistics earned upon candidacy, June 2022

### **Tulane University**

2014–2018

**B.S.** Linguistics, Russian

Advisors: Charles Mignot and Judith Maxwell

Thesis: Competing Motivations Driving Semi-Optimal Focus Construction Types

## EMPLOYMENT

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### **University of Rochester**

2024–present

Assistant Professor - Linguistics and Data Science

### **University of Washington**

2018–2024

Teaching/Research Assistant

### **Microsoft**

Summer 2022

Research Intern, MSR Cryptography and Privacy

### **Apple**

Summer 2020

AI/ML Intern, Siri Web Answers

## HONORS & AWARDS

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### **Empire AI Beta Allocation - Rapid Adaptation of ASR Models in Data-Scarce Scenarios**

2025

University of Rochester; 5,000 service units

### **Presidential Dissertation Fellowship**

2024

UW Graduate School

### **Excellence in Linguistic Research Fellowship**

2022

UW Department of Linguistics

### **Foreign Language and Area Studies Fellowship - Inuktitut Language**

2019–2020

U.S. Department of Education, UW Jackson School of International Studies

### **Newberry Research Library Summer Institute**

2019

The Newberry Library, Chicago; Fellow; Indigenous Language Revitalization

<b>Inducted into Phi Beta Kappa Honor Society</b>	2018
Tulane University	
<b>Outstanding Linguistics Thesis</b>	2018
Tulane University	
<b>Presidential Scholarship</b>	2014
Tulane University	

## PUBLICATIONS

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### Peer-Reviewed

2026. [Linguistically Informed Evaluation of Multilingual ASR for African Languages](#). Fei-Yueh Chen, Lateef Adeleke, **C.M. Downey**. *To appear: Proceedings of the 7th Workshop on African Natural Language Processing (AfricaNLP)*.

2024. [Targeted Multilingual Adaptation for Low-resource Language Families](#). **C.M. Downey**, Terra Blevins, Dhwaní Serai, Dwija Parikh, Shane Steinert-Threlkeld. *Findings of the Association for Computational Linguistics: EMNLP 2024*.

2023. [Embedding Structure Matters: Comparing Methods to Adapt Multilingual Vocabularies to New Languages](#). **C.M. Downey**, Terra Blevins, Nora Goldfine, Shane Steinert-Threlkeld. *Proceedings of the 3rd Workshop on Multilingual Representation Learning*.

### Best Paper Award

2023. [Learning to Translate by Learning to Communicate](#). **C.M. Downey**, Leo Z. Liu, Xuhui Zhou, Shane Steinert-Threlkeld. *Proceedings of the 3rd Workshop on Multilingual Representation Learning*.

2022. [A Masked Segmental Language Model for Natural Language Segmentation](#). **C.M. Downey**, Fei Xia, Gina-Anne Levow, Shane Steinert-Threlkeld. *Proceedings of the 19th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*.

2022. [Multilingual unsupervised sequence segmentation transfers to extremely low-resource languages](#). **C.M. Downey**, Shannon Drizin, Levon Haroutunian, Shivin Thukral. *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics*.

2022. [Emergent Communication Fine-tuning \(EC-FT\) for Pretrained Language Models](#). Shane Steinert-Threlkeld, Leo Z. Liu, Xuhui Zhou, **C.M. Downey**. *Proceedings of the 5th Annual Workshop on Emergent Communication*.

### Runner-up Best Paper Award

### Dissertation

2024. [Adapting Pre-Trained Models and Leveraging Targeted Multilinguality](#). **C.M. Downey**. *PhD Dissertation, University of Washington*.

### Pre-prints

2022. [Planting and Mitigating Memorized Content in Predictive-Text Language Models](#). **C.M. Downey**, Wei Dai, Huseyin A. Inan, Kim Laine, Saurabh Naik, Tomasz Religa. *Arxiv*.

## TALKS

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### Refereed

<b>Targeted Multilingual Adaptation for Low-resource Language Families</b> The 2024 Conference on Empirical Methods in Natural Language Processing (poster)	2024
<b>Embedding Structure Matters: Comparing Methods to Adapt Multilingual Vocabularies to New Languages</b> 3rd Workshop on Multilingual Representation Learning, EMNLP (oral)	2023
<b>Learning to Translate by Learning to Communicate</b> 3rd Workshop on Multilingual Representation Learning, EMNLP (poster)	2023
<b>A Masked Segmental Language Model for Natural Language Segmentation</b> 19th SIGMORPHON Workshop, NAACL (oral)	2022
<b>Multilingual unsupervised sequence segmentation transfers to extremely low-resource languages</b> 60th Annual Meeting of the Association for Computational Linguistics (poster)	2022

### Invited

<b>Improving Computational Tools for Under-resourced and Endangered Languages</b>	
University at Buffalo Department of Linguistics	2026
George Mason University Linguistics Colloquium	2025
University of Rochester Center for Integrated Research Computing Symposium	2024
University of British Columbia Department of Linguistics	2024
University of Pittsburgh Department of Linguistics	2024
Macalester College Department of Linguistics	2024
University of Utah Department of Linguistics	2024
University of Rochester Goergen Institute for Data Science and Department of Linguistics	2023
<b>Multilingual Tokenizer Adaptation: Specializing Representations for Target Languages</b>	2025
Speech and text LLMs revisited, Université Paris Cité	
<b>Fostering Grassroots Language Technology and AI</b>	2025
Goergen Institute for Data Science and AI 10th Anniversary	
<b>Integrating NLP Models into Language Documentation Workflows</b>	2024
Central New York Humanities Corridor Sound Structures Workshop	

## TEACHING

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### Instructor

Spring 2026	UR DSAC 251/451: Machine Learning with Limited Data UR LING 250/450: Data Science for Linguistics
Fall 2025	UR LING 282/482: Deep Learning for Computational Linguistics
Spring 2025	UR LING 250/450: Data Science for Linguistics
Fall 2024	UR LING 282/482: Deep Learning for Computational Linguistics
Summer 2023	UW LING 473: Basics for Computational Linguistics ( <i>Co-Instructor with Emily Proch Ahn</i> )
Spring 2023	UW LING 574: Deep Learning for Natural Language Processing

### Teaching Assistant

Winter 2023	UW LING 572: Advanced Statistical Methods for Natural Language Processing
Spring 2022	UW LING 574: Deep Learning for Natural Language Processing
Winter 2022	UW LING 200: Introduction to Linguistic Thought
Fall 2021	UW LING 269: Swearing and Taboo Language
Spring 2021	UW LING 574: Deep Learning for Natural Language Processing
Fall 2020	UW LING 566: Introduction to Syntax for Computational Linguistics
Spring 2019	UW LING 200: Introduction to Linguistic Thought UW ASL 305: Introduction to American Deaf Culture ( <i>grader</i> )
Fall 2018	UW LING 200: Introduction to Linguistic Thought UW LING 406: Introduction to Syntax ( <i>grader</i> )

### Guest Lectures

May 2024	“Multilingual Language Modeling” <i>LING 574: Deep Learning for NLP, University of Washington, instructed by Shane Steinert-Threlkeld</i>
May 2022	“Multilingual Language Modeling” <i>LING 574: Deep Learning for NLP, University of Washington, instructed by Shane Steinert-Threlkeld</i>
May 2021	“Multilingual Language Modeling” <i>LING 574: Deep Learning for NLP, University of Washington, instructed by Shane Steinert-Threlkeld</i>
May 2020	“Computational Linguistics and Language Revitalization” <i>LING 234: Language and Diversity, University of Washington, instructed by Lorna Rozelle</i>
Jan 2020	“Computational Linguistics and Language Revitalization” <i>ENGL 4717: NAIS Capstone Seminar, University of Colorado, instructed by Penelope Kelsey</i>

## SERVICE

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<b>UR Linguistics Graduate Admissions Committee</b>	2025
Reviewer	
<b>National Science Foundation</b>	2025
Panelist	
<b>Workshop on NLP for Indigenous Languages of the Americas (AmericasNLP)</b>	2024, 2023
Reviewer	
<b>Multilingual Information Access Workshop</b>	2022
Reviewer	