Nathaniel Imel

EDUCATION

University of California, Irvine	Irvine, CA
Ph.D. in Language Science	2023–now
Ph.D. Program in Logic and Philosophy of Science	2022-2023
University of Washington	Seattle, WA
M.S. in Computational Linguistics	2020-2022
University of California, San Diego	La Jolla, CA
B.A. in Philosophy	2016–2020
Summer Programs	
Santa Fe Institute International Summer School (Complexity-GAINS)	Cambridge, 2023
North American Summer School for Logic, Language and Information (NASSLLI)	USC, 2022
Summer School in Logic and Formal Epistemology (LFE)	CMU, 2021

PUBLICATIONS

- [1] **N. Imel**, The evolution of efficient compression in signaling games, in *Proceedings of the 45th Annual Meeting of the Cognitive Science Society*, 2023.
- [2] Q. Guo, **N. Imel**, and S. Steinert-Threlkeld, A database for modal semantic typology, in *Proceedings of the 4th Workshop on Research in Computational Linguistic Typology and Multilingual NLP*, Seattle, Washington: Association for Computational Linguistics, Jul. 2022, pp. 42–51.
- [3] **N. Imel** and S. Steinert-Threlkeld, Modals in natural language optimize the simplicity/informativeness trade-off, in *Proceedings of Semantics and Linguistic Theory (SALT 32)*, 2022.

Talks and Presentations

Modals in natural language optimize the simplicity/informativeness	s trade-off
Semantics and Linguistic Theory (Mexico City)	6/08/22
Experiments in Linguistic Meaning (Philadelphia)	5/18/22
The evolution of efficient compression in signaling games	
University of Tübingen Linguistics Colloquium (virtual)	7/04/23
CogSci 2023 (Sidney, virtual)	7/26/23

Works in progress

Citation-similarity relationships in astrophysics literature

With Zachary Hafen. (submitted)

Noisy population dynamics lead to efficiently compressed semantic systems

With Noga Zaslavsky, Michael Franke and Richard Futrell. (submitted)

An efficient communication analysis of modal typology

With Qingxia Guo and Shane Steinert-Threlkeld. (link)

Deontic priority in the lexicalization of impossibility modals

With Anne Mucha, Wataru Uegaki, and Shane Steinert-Threlkeld. (link).

The artificial language toolkit (ALTK)

With Shane Steinert-Threlkeld. (link).

AWARDS

Merit Fellowships (UC Irvine School of Social Sciences)

2022

Best paper "Desire Semantics", selected for UC San Diego undergraduate philosophy journal Intuitions

2020

TEACHING

• Introduction to Linguistics (LSCI 3)

Fall 2023

• Basic Economics I (ECON 20A)

Spring 2023

• Introduction to Symbolic Logic (LPS 30)

Winter 2023

SELECTED GRADUATE COURSEWORK

Experimental Methods Xin Xie Toby Meadows Computability Theory and Incompleteness Game Theory in the Philosophy of Biology Cailin O'Connor Information Theory and Language Richard Futrell Kai Wehmeier Mathematical Logic Set Theory Toby Meadows Social Dynamics Brian Skyrms and Simon Huttegger Philosophy of Science Foundations Kyle Stanford Deep Learning for NLP Shane Steinert-Threlkeld Machine Learning Sewoong Oh and Simon Du Advanced Statistical Methods for NLP Fei Xia NLP Systems and Applications Gina Anne-Levow Deep Processing Techniques For NLP Shane Steinert-Threlkeld Shallow Processing Techniques For NLP Fei Xia Multilingual Grammar Engineering Emily Bender Syntax for Computational Linguistics Emily Bender Formal Semantics II Toshiyuki Ogihara **Phonetics** Marina Oganyan

EXPERIENCE

Posh Technologies
NLP Research Intern

Boston, MA

Summer 2021

Performed error analysis experiments of chatbot and presented results to NLP team; wrote unit tests for intent-classification software; curated large datasets and pipelines for ML model evaluation