

MAI HA VU

Curriculum Vitae

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EMPLOYMENT

- 2024 – present **Assistant Professor, Teaching Stream**
Department of Language Studies (55%)
Department of Mathematics, Computer Science, and Statistics (45%)
University of Toronto Mississauga: Mississauga, ON, Canada
- 2021 – 2024 **Post-doctoral Research Fellow**
Department of Linguistics and Scandinavian Studies
University of Oslo: Oslo, Norway
ImmunoLingo project (PI: Dag Haug)
- 2019 – 2021 **Hungarian Lexical Linguist**
Apple Inc.: Cupertino, CA, USA

EDUCATION

- 2020 **Ph.D. in Linguistics**, University of Delaware
- Thesis: *A quantifier-based approach to NPI-licensing typology: Empirical and computational investigations* ([pdf](#))
 - Committee: Benjamin Bruening (chair), Jeffrey Heinz, Satoshi Tomioka, Thomas Graf
- 2014 **M.A. in Linguistics**, University of Delaware
- 2013 **B.A. in Psychology** with Honors, Grinnell College

Non-Degree Study

- 2015 July **LSA Summer Institute**
University of Chicago: Chicago, IL

JOURNAL ARTICLES

- 2024 **Mai Ha Vu**, Philippe A. Robert, Rahmad Akbar, Bartłomiej Swiatczak, Geir Kjetil Sandve, Dag Trygve Truslew Haug, and Victor Greiff. Linguistics-based formalization of the antibody language as a basis for antibody language models. *Nature Computational Science*, 4(6):412–422, June 2024. ISSN 2662-8457. doi:10.1038/s43588-024-00642-3. Publisher: Nature Publishing Group

- 2023 **Mai Ha Vu**, Rahmad Akbar, Philippe A. Robert, Bartłomiej Swiatczak, Geir Kjetil Sandve, Victor Greiff, and Dag Trygve Truslew Haug. Linguistically inspired roadmap for building biologically reliable protein language models. *Nature Machine Intelligence*, pages 1–12, 2023. ISSN 2522-5839. doi:[10.1038/s42256-023-00637-1](https://doi.org/10.1038/s42256-023-00637-1)
- 2022 Philippe A. Robert, Rahmad Akbar, Robert Frank, Milena Pavlović, Michael Widrich, Igor Snapkov, Andrei Slabodkin, Maria Chernigovskaya, Lonneke Schaffer, Eva Smorodina, Puneet Rawat, Brij Bhushan Mehta, **Mai Ha Vu**, Ingvild Frøberg Mathisen, Aurél Prószy, Krzysztof Abram, Alex Olar, Enkelejda Miho, Dag Trygve Truslew Haug, Fridtjof Lund-Johansen, Sepp Hochreiter, Ingrid Hobæk Haff, Günter Klambauer, Geir Kjetil Sandve, and Victor Greiff. Unconstrained generation of synthetic antibody–antigen structures to guide machine learning methodology for antibody specificity prediction. *Nature Computational Science*, 2(12): 845–865, 2022. ISSN 2662-8457. doi:[10.1038/s43588-022-00372-4](https://doi.org/10.1038/s43588-022-00372-4)
- 2022 Rahmad Akbar, Habib Bashour, Puneet Rawat, Philippe A. Robert, Eva Smorodina, Tudor-Stefan Cotet, Karine Flem-Karlsen, Robert Frank, Brij Bhushan Mehta, **Mai Ha Vu**, Talip Zengin, Jose Gutierrez-Marcos, Fridtjof Lund-Johansen, Jan Terje Andersen, and Victor Greiff. Progress and challenges for the machine learning-based design of fit-for-purpose monoclonal antibodies. *mAbs*, 14(1): 2008790, 2022. doi:[10.1080/19420862.2021.2008790](https://doi.org/10.1080/19420862.2021.2008790)
- 2018 **Mai Ha Vu**, Ashkan Zehfroosh, Kristina Strother-Garcia, Michael Sebok, Jeffrey Heinz, and Herbert G. Tanner. Statistical relational learning with unconventional string models. *Frontiers in Robotics and AI*, 5:76, 2018. ISSN 2296-9144. doi:[10.3389/frobt.2018.00076](https://doi.org/10.3389/frobt.2018.00076)

PREPRINTS

- 2022 **Mai Ha Vu**, Philippe A. Robert, Rahmad Akbar, Bartłomiej Swiatczak, Geir Kjetil Sandve, Dag Trygve Truslew Haug, and Victor Greiff. Immunolingo: Linguistics-based formalization of the antibody language. 2022b. doi:[10.48550/ARXIV.2209.12635](https://doi.org/10.48550/ARXIV.2209.12635)

PAPER-REVIEWED PROCEEDINGS

- 2022 **Mai Ha Vu**, Aniello De Santo, and Hossep Dolatian. Logical transductions for the typology of ditransitive prosody. In *Proceedings of the 19th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, pages 29–38, Seattle, Washington, July 2022a. Association for Computational Linguistics. doi:[10.18653/v1/2022.sigmorphon-1.4](https://doi.org/10.18653/v1/2022.sigmorphon-1.4)
- 2019 **Mai Ha Vu**, Nazila Shafiei, and Thomas Graf. Case assignment in TSL syntax: a case study. *Proceedings of the Society for Computation in Linguistics*, 2(28), 2019. doi:<https://doi.org/10.7275/sywwz-xw23>
- 2018 **Mai Ha Vu**. Towards a formal description of NPI-licensing patterns. *Proceedings of the Society for Computation in Linguistics*, 1(17), 2018. doi:[10.7275/R5DF6PDP](https://doi.org/10.7275/R5DF6PDP)

ABSTRACT-REVIEWED PROCEEDINGS

- 2019 **Mai Ha Vu** and Karoliina Lohiniva. In situ wh-hell: The view from Hungarian. In Maggie Baird and Jonathan Pesetsky, editors, *NELS 49: Proceedings of the Forty-Ninth Annual Meeting of the North East Linguistic Society: Volume 3*, pages 275 – 284. GLSA, 2019
- 2018 Jinwoo Jo and **Mai Ha Vu**. A syntactic account of morphological causatives in Japanese and Korean. In Mary Shin Kim Shin Fukuda and Mee-Jeong Park, editors, *Proceedings of the 25th Japanese/Korean Linguistics Conference, Poster Papers*. CSLI Publications, 2018
- 2017 Amanda Payne, **Mai Ha Vu**, and Jeffrey Heinz. A formal analysis of correspondence theory. In *Proceedings of the Annual Meetings on Phonology*, volume 4. LSA, 2017. doi:10.3765/amp.v4i0.3987

REFEREED TALKS & POSTERS

- 2024 So Young Lee and **Mai Ha Vu**. Revisiting the NPI illusion effect: exploring the influence of distance and licenser types. Talk at the Linguistic Society of America Annual Meeting, New York City, NY, January, 2024
- 2022 **Mai Ha Vu**, Aniello De Santo, and Hossep Dolatian. Logical transductions for the typology of ditransitive prosody. Presentation at the 19th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, Seattle WA, July, 2022
- 2022 **Mai Ha Vu** and So Young Lee. Comparing neural-network based language models to human sentence processing: choice of task matters. Poster presentation at Human Sentence Processing, San Diego, CA, March, 2022
- 2019 **Mai Ha Vu**. Quantificational force of Hungarian NPIs: evidence from adverbial scope. Poster presentation at the Linguistic Society of America Annual Meeting, New York City, NY, January, 2019
- Mai Ha Vu**, Nazila Shafiei, and Thomas Graf. Case assignment in TSL syntax: a case study. Poster presentation at the Society of Computation in Linguistics, New York City, NY, January, 2019
- 2018 **Mai Ha Vu** and Karoliina Lohiniva. In situ wh-hell: The view from Hungarian. Poster presentation at the 49th Annual Meeting of the Northeast Linguistic Society, Ithaca, NY, October 5, 2018
- Mai Ha Vu** and Karoliina Lohiniva. In-situ Hungarian wh-hell: evidence against an intervention account. Poster presentation at the 28th Colloquium of Generative Grammar, Tarragona, Spain, May 30, 2018

Jeffrey Heinz, Kristina Strother-Garcia, **Mai Ha Vu**, Hossep Dolatian, and Herbert Tanner. Integrating the sciences of language learning, activity recognition, human-robot interaction, and pediatric rehabilitation. Talk at the Linguistic Society of America Annual Meeting, Showcase: Expanding the Reach of Linguistics: Collaborations with Other Disciplines and Beyond, Salt Lake City, UT, January 6, 2018

Mai Ha Vu. Towards a formal description of NPI-licensing patterns. Poster presentation at the Society of Computation in Linguistics, Salt Lake City, UT, January 4, 2018

2017 Jinwoo Jo and **Mai Ha Vu**. A syntactic account of morphological causatives in Japanese and Korean. Poster presentation at the 25th Japanese/Korean Linguistics Conference, Honolulu, HI, October 13, 2017

Jinwoo Jo and **Mai Ha Vu**. Typology of morphological causatives: A syntactic account. Poster presentation at the 19th Seoul International Conference on Generative Grammar, Seoul, Korea, August 9, 2017

Mai Ha Vu. Focus negation is constituent negation in Hungarian. Poster presentation at Linguistic Society of America Annual Meeting, Austin, TX, January 6, 2017

2016 Amanda Payne, **Mai Ha Vu**, and Jeffrey Heinz. A formal analysis of Correspondence Theory. Poster presentation at the Annual Meeting of Phonology, Los Angeles, CA, October 22, 2016

Mai Ha Vu. Negation in Hungarian. Talk at the Cognitive Science Graduate Student Conference at University of Delaware, Newark, DE, March 4, 2016

2015 Justin Rill and **Mai Ha Vu**. Extreme locality in Balinese complex sentences. Poster presentation at the Linguistic Society of America Annual Meeting, Portland, OR, January 9, 2015

2012 **Mai Ha Vu**, Heather Kubicek, and Janet Gibson. Working memory, age and expertise in Sudoku puzzles. Poster presentation at annual Midwestern Psychological Association, Chicago, IL, 2012 March

TEACHING EXPERIENCE

2021 **Courses taught at University of Oslo**
LING 4170: *Formal Language Theory in Linguistics*: 21F

2015 – 2018 **Courses taught at University of Delaware**
LING 101: *Introduction to Linguistics*: 14S, 15F
LING 101H: *Introduction to Linguistics (Honors)*: 16F
LING 102: *Language, Mind, and Society*: 16S
LING 202: *Science of Language*: 16W
LING/WOMS 222: *Language and Gender*: 17S
LING 477: *Structure of English*: 18F

2013 – 2014 **Courses assisted at University of Delaware**
LING 101: *Introduction to Linguistics*: 13F, 14F (Instructor: Gabriella Hermon)

LING 680: *Sociolinguistics*: 14S (Instructor: Darrell Larsen)
2012–2013 **Hungarian Language Tutor**, Grinnell College: Grinnell, IA
2012 Fall **Psychology Tutor**, Grinnell College: Grinnell, IA

GRANTS & FELLOWSHIPS

2018 **Summer Research Grant**
University of Delaware

2017 **Professional Development Award**
University of Delaware travel grant

Summer Research Grant
Department of Linguistics and Cognitive Science, University of Delaware

2016 **Professional Development Award**
University of Delaware travel grant

Graduate Travel Grant
Department of Linguistics and Cognitive Science, University of Delaware

Summer Research Grant
Department of Linguistics and Cognitive Science, University of Delaware

2015 **Graduate Improvement Grant**
Department of Linguistics and Cognitive Science, University of Delaware

Graduate Travel Grant
Department of Linguistics and Cognitive Science, University of Delaware

OTHER WORK EXPERIENCE

2013 Spring **Grader**, Grinnell College: Grinnell, IA
Introduction to Statistics, *Department of Mathematics and Statistics*
Functional Problem Solving, *Department of Computer Science*

REVIEWING

Journal Patterns, Nature Communications Biology, Nature Machine Intelligence

SERVICE

2022–
2017–2018 **Organizer**, Shut Up and Write at ILN
Vice President, Linguistics Association of Delaware
Department of Linguistics and Cognitive Science
University of Delaware: Newark, DE

- 2016–2018 **Graduate student webmaster**, Department of Linguistics and Cognitive Science
University of Delaware: Newark, DE
- 2015–2016 **Organizer**, Syntax and Semantics Lab (SySeL)
University of Delaware: Newark, DE
- 2014–2016 **Member**, Linguistics Colloquium Series Committee
University of Delaware: Newark, DE

EVENTS ORGANIZED

- 2015–2019 **Annual L^AT_EXworkshop**. University of Delaware, Newark, DE. September.
- 2016 **Cognitive Science Graduate Student Conference (CSGSC)** (with M. Grigoroglou & K. Strother-Garcia). University of Delaware, Newark, DE. March.
- 2015 **Cognitive Science Graduate Student Conference (CSGSC)** (with X. Dinh, H. J. Hwangbo, & K. Strother-Garcia). University of Delaware, Newark, DE. March.

MEMBERSHIPS

- 2022– Member, Association of Computational Linguistics
- 2012–2019 Student Member, Linguistic Society of America

LANGUAGE SKILLS

Hungarian (native), **English** (fluent), **Vietnamese** (heritage speaker), **Balinese** (field work knowledge)

COMPUTER SKILLS

- OS Linux, PC
- Programming C, JAVA, Lisp, OCaml, PYTHON, Scheme
- Other L^AT_EX, Microsoft Office, SPSS, Minitab, E-Prime