

# MAI HA VU

## Curriculum Vitae

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### RESEARCH INTERESTS

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Computational/Mathematical Linguistics, Syntax, Typology

### EMPLOYMENT

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| 2021 – present | <b>Post-doctoral Research Fellow</b><br>University of Oslo: Oslo, Norway<br><i>ImmunoLingo</i> project (PI: Dag Haug) |
| 2019 – 2021    | <b>Hungarian Lexical Linguist</b><br>Apple Inc.: Cupertino, CA  |

### EDUCATION

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| 2020 | <b>Ph.D. in Linguistics</b> , University of Delaware <ul style="list-style-type: none"><li>• Thesis: <i>A quantifier-based approach to NPI-licensing typology: Empirical and computational investigations</i> (<a href="#">pdf</a>)</li><li>• Committee: Benjamin Bruening (chair), Jeffrey Heinz, Satoshi Tomioka, Thomas Graf</li></ul> |
| 2014 | <b>M.A. in Linguistics</b> , University of Delaware   |
| 2013 | <b>B.A. in Psychology</b> with Honors, Grinnell College   |

### NON-DEGREE STUDY

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| 2015 July | <b>LSA Summer Institute</b><br>University of Chicago: Chicago, IL |
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### JOURNAL ARTICLES

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| 2023 | <b>Mai Ha Vu</b> , 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. <i>Nature Machine Intelligence</i> , pages 1–12, 2023. ISSN 2522-5839. doi: <a href="https://doi.org/10.1038/s42256-023-00637-1">10.1038/s42256-023-00637-1</a> |
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- 2022 Philippe A. Robert, Rahmad Akbar, Robert Frank, Milena Pavlović, Michael Widrich, Igor Snapkov, Andrei Slabodkin, Maria Chernigovskaya, Lonneke Schef-fer, Eva Smorodina, Puneet Rawat, Brij Bhushan Mehta, **Mai Ha Vu**, In-gvild Frøberg Mathisen, Aurél Prós, Krzysztof Abram, Alex Olar, Enkelejda Miho, Dag Trygve Tryslew 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

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- 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

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- 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/sywz-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

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- 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](https://doi.org/10.3765/amp.v4i0.3987)

## REFEREED TALKS & POSTERS

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- 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

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- 2021 Fall **Instructor**, University of Oslo: Oslo, Norway  
*Formal Language Theory in Linguistics* (LING 4170)
- 2015 Spring – 2018 Fall **Instructor**, University of Delaware: Newark, DE  
*Introduction to Linguistics* (LING 101): 2014 Spring, 2015 Fall.  
*Introduction to Linguistics (Honors)* (LING 101): 2016 Fall.  
*Language, Mind, and Society* (LING 102): 2016 Spring  
*Science of Language* (LING 202): 2016 Winter  
*Language and Gender* (LING/WOMS 222): 2017 Spring  
*Structure of English* (LING 477): 2018 Fall
- 2013 Fall – 2014 Fall **Teaching Assistant**, University of Delaware: Newark, DE  
*Introduction to Linguistics* (LING 101): 2013 Fall, 2014 Fall.  
Instructor: Dr. Gabriella Hermon  
*Sociolinguistics*: 2014 Spring.  
Instructor: Dr. Darrell Larsen
- 2012–2013 **Hungarian Language Tutor**, Grinnell College: Grinnell, IA
- 2012 Fall **Psychology Tutor**, Grinnell College: Grinnell, IA

## GRANTS & FELLOWSHIPS

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- 2018 **Summer Research Grant**  
University of Delaware

2017	<b>Professional Development Award</b> University of Delaware travel grant
	<b>Summer Research Grant</b> Department of Linguistics and Cognitive Science, University of Delaware
2016	<b>Professional Development Award</b> University of Delaware travel grant
	<b>Graduate Travel Grant</b> Department of Linguistics and Cognitive Science, University of Delaware
	<b>Summer Research Grant</b> Department of Linguistics and Cognitive Science, University of Delaware
2015	<b>Graduate Improvement Grant</b> Department of Linguistics and Cognitive Science, University of Delaware
	<b>Graduate Travel Grant</b> Department of Linguistics and Cognitive Science, University of Delaware

## OTHER WORK EXPERIENCE

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2013 Spring	<b>Grader</b> , Grinnell College: Grinnell, IA Introduction to Statistics, <i>Department of Mathematics and Statistics</i> Functional Problem Solving, <i>Department of Computer Science</i>
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## REVIEWING

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Journal	Patterns, Nature Communications Biology, Nature Machine Intelligence
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## SERVICE

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2022– 2017–2018	<b>Organizer</b> , Shut Up and Write at ILN <b>Vice President</b> , Linguistics Association of Delaware Department of Linguistics and Cognitive Science University of Delaware: Newark, DE
2016–2018	<b>Graduate student webmaster</b> , Department of Linguistics and Cognitive Science University of Delaware: Newark, DE
2015–2016	<b>Organizer</b> , Syntax and Semantics Lab (SySeL) University of Delaware: Newark, DE
2014–2016	<b>Member</b> , Linguistics Colloquium Series Committee University of Delaware: Newark, DE

## EVENTS ORGANIZED

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2015-2019	<b>Annual <math>\text{\LaTeX}</math>workshop.</b> University of Delaware, Newark, DE. September.
2016	<b>Cognitive Science Graduate Student Conference (CSGSC)</b> (with M. Grigorioglou & K. Strother-Garcia). University of Delaware, Newark, DE. March.
2015	<b>Cognitive Science Graduate Student Conference (CSGSC)</b> (with X. Dinh, H. J. Hwangbo, & K. Strother-Garcia). University of Delaware, Newark, DE. March.

## MEMBERSHIPS

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

## LANGUAGE SKILLS

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

## COMPUTER SKILLS

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OS	Linux, PC
Programming	C, JAVA, Lisp, OCaml, PYTHON, Scheme
Other	$\text{\LaTeX}$ , Microsoft Office, SPSS, Minitab, E-Prime