Daniel Hershcovich

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FOCUS AREAS Natural Language Processing: Large Language Models, Cultural Alignment, Food.

EMPLOYMENT

Tenure-Track Assistant Professor, University of Copenhagen. Since 1/3/2020.

Postdoctoral Researcher, University of Copenhagen. 1/3/2019–29/2/2020.

Teaching Assistant, Hebrew University of Jerusalem. 1/7/2015–31/8/2018.

Researcher and Software Engineer, IBM Research. 1/8/2008–31/1/2019.

EDUCATION

Ph.D., Computational Neuroscience, Hebrew University of Jerusalem. 10/10/2019.
Dissertation: *Universal Semantic Parsing with Neural Networks.*
Advisors: Ari Rappoport and Omri Abend.
Focused on the semantic structure of natural language, and the application of neural networks to natural language processing. Developed a parser for UCCA, a cross-linguistically applicable framework for semantic representation, which builds on extensive typological work, and supports rapid annotation.

M.Sc., Computational Neuroscience, Hebrew University of Jerusalem. 22/07/2017.

B.Sc., Mathematics and Computer Science, Open University of Israel. 29/11/2010.

RESEARCH GRANTS

Aligning Multi-Agent Interactions for Sustainable Food Behavior (AMAI). PI. Villum Experiment (16% acceptance). 2026-2028. 2,490,126 DKK.

Automated Legal Information and Knowledge Extraction (ALIKE). Co-PI (with Henrik Palmer Olsen. Independent Research Fund Denmark. 2025–2027). 6,191,267 DKK.

Explainable Hybrid-AI for Computational Law and Accurate Legal Chatbots (XHAILe). WP Leader. Innovation Fund Denmark Grand Solutions. 2025–2028). 18,191,683 DKK.

Haptic Captioning—Using Natural Language Models to Design Haptic Experiences. Co-PI (with Hasti Seifi). Villum Experiment (17% acceptance). 2023–2025. 2,000,000 DKK.

Mining the Meaning: A semantic parsing approach to the study of literary change. Co-PI (with Jens Bjerring-Hansen). Data+, University of Copenhagen (31% acceptance). 2021–2025. Total 1,013,000 DKK.

HONORS AND AWARDS

Outstanding Paper Awards:
ACL 2017: A Transition-Based Directed Acyclic Graph Parser for UCCA
ACL 2023: What's the Meaning of Superhuman Performance in Today's NLU?
BEA 2024: Automated Sentence Generation for a Spaced Repetition Software.
Shimon Peres Doctoral Fellowship 2015.
Google Europe Scholarship for Students with Disabilities 2015.

ACADEMIC ACTIVITIES

Senior Area Chair, NAACL 2025.
Faculty Advisor, Student Research Workshop, ACL 2025.
Program Chair, NoDaLiDa/Baltic-HLT 2025.
Chair, Workshop on Social Influence in Conversations (at EMNLP 2024).
Chair, Workshop on Cross-Cultural Considerations in NLP (at ACL 2024–2025).
Workshops Chair, EMNLP 2022.
Program Chair, HPLT & NLPL Winter School 2023.
Chair, Israel 2017 Seminar of Computational Linguistics.

Chair, CoNLL 2019–2020 Shared Tasks on Meaning Representation Parsing.
Chair, SemEval-2019 Task 1 on Cross-lingual Semantic Parsing.
Guest Editor, Künstliche Intelligenz Special Issue: NLP and Semantics. 2021.
Review and Area Chair, 30+ academic conferences, workshops and journals.

TEACHING   University of Copenhagen:
Lecturer & Course organizer, *Natural Language Processing* 2019–2025.
Lecturer & Course organizer, *Introduction to Data Science* 2023–2025.
Lecturer, *Introduction to Machine Learning* 2020.
Supervisor of 8 BSc projects and 19 MSc theses.

SUPERVISION   **Postdoc co-supervisor,** Ali Al-Laith (2022–2025, with Jens Bjerring-Hansen), Guimin Hu (2023–2025, with Hasti Seifi).
PhD co-supervisor, Ruixiang Cui (2021–2024, with Anders Søgaard), Antonia Karamolegkou (2023–2025, with Anders Søgaard), Nina S. Schneidermann (2022–2024, with Bolette S. Pedersen), Alexander Conroy (2022-2024, with Jens Bjerring-Hansen).

LEAVE   **Parental leave**, May 20–August 31, 2021; October 20, 2023–January 14, 2024.

PUBLICATIONS   69 publications (12 as first author). Citations: 2694. h-index: 23.
For a full list, see `https://scholar.google.com/citations?user=479qIucAAAAJ`.

PUBLICATIONS

PEER-REVIEWED JOURNALS AND CONFERENCES

1. Haijiang Liu, Qiyuan Li, Chao Gao, Yong Cao, Xiangyu Xu, Xun Wu, **Daniel Hershcovich** and Jinguang Gu. "Beyond Demographics: Enhancing Cultural Value Survey Simulation with Multi-Stage Personality-Driven Cognitive Reasoning". *In Proceedings of EMNLP 2025*

   Guimin Hu, **Daniel Hershcovich** and Hasti Seifi In Findings of EMNLP 2025

2. Chenye Zou, Xingyue Wen, Tianyi Hu, Qian Janice Wang and **Daniel Hershcovich**. "Do LLMs Understand Wine Descriptors Across Cultures? A Benchmark for Cultural Adaptions of Wine Reviews". *In Findings of EMNLP 2025*

   Antonia Karamolegkou, Malvina Nikandrou, Georgios Pantazopoulos, Danae Sanchez Villegas, Phillip Rust, Ruchira Dhar, **Daniel Hershcovich** and Anders Søgaard In Proceedings of ACL 2025

3. Haijiang Liu, Yong Cao, Xun Wu, Chen Qiu, Jinguang Gu, Maofu Liu and **Daniel Hershcovich**. "Towards realistic evaluation of cultural value alignment in large language models: Diversity enhancement for survey response simulation". *In Information Processing & Management, 2025*

4. Yong Cao, Haijiang Liu, Arnav Arora, Isabelle Augenstein, Paul Röttger and **Daniel Hershcovich**. "Specializing Large Language Models to Simulate Survey Response Distributions for Global Populations". *In Proceedings of NAACL 2025*

5. Li Zhou, Taelin Karidi, Wanlong Liu, Nicolas Garneau, Yong Cao, Wenyu Chen, Haizhou Li and **Daniel Hershcovich**. "Does Mapo Tofu Contain Coffee? Probing LLMs for Food-related Cultural Knowledge". *In Proceedings of NAACL 2025*

6. Srishti Yadav, Zhi Zhang, **Daniel Hershcovich** and Ekaterina Shutova. "Beyond Words: Exploring Cultural Value Sensitivity in Multimodal Models". *In Findings of NAACL 2025*

7. Kirstine Nielsen Degn, Jens Bjerring-Hansen, Ali Al-Laith and **Daniel Hershcovich**. "Unhappy Texts? A Gendered and Computational Rereading of The Modern Breakthrough". *In Scandinavian Studies, 2. 97, 2025*

8. Jens Bjerring-Hansen, Ali Al-Laith, **Daniel Hershcovich**, Alexander Conroy and Sebastian Ørtoft Rasmussen. "Literary Time Travel: Distinguishing Past and Contemporary Worlds in Danish and Norwegian Fiction". *In Proceedings of CHR 2024*

9. Wenyan Li, Crystina Zhang, Jiaang Li, Qiwei Peng, Raphael Tang, Li Zhou, Weijia Zhang, Guimin Hu, Yifei Yuan, Anders Søgaard, **Daniel Hershcovich** and Desmond Elliott. "FoodieQA: A Multimodal Dataset for Fine-Grained Understanding of Chinese Food Culture". *In Proceedings of EMNLP 2024*

   Ali Al-Laith, **Daniel Hershcovich**, Jens Bjerring-Hansen, Jakob Ingemann Parby, Alexander Conroy and Timothy R Tangherlini In Proceedings of EMNLP 2024

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10. Guimin Hu, Zhihong Zhu, **Daniel Hershcovich**, Lijie Hu, Hasti Seifi and Jiayuan Xie. "UniMEEC: Towards Unified Multimodal Emotion Recognition and Emotion Cause". *In Findings of EMNLP 2024*

11. Tianyi Hu, Maria Maistro and **Daniel Hershcovich**. "Bridging Cultures in the Kitchen: A Framework and Benchmark for Cross-Cultural Recipe Retrieval". *In Proceedings of EMNLP 2024*

    Antonia Karamolegkou, Phillip Rust, Yong Cao, Ruixiang Cui, **Daniel Hershcovich** and Anders Søgaard In Proceedings of Human-Centered Large Language Modeling Workshop 2024

12. Supriti Vijay and **Daniel Hershcovich**. "Can Abstract Meaning Representation Facilitate Fair Legal Judgement Predictions?". *In Proceedings of Workshop on Insights from Negative Results in NLP 2024*

13. Benjamin Paddags, **Daniel Hershcovich** and Valkyrie Arline Savage. "Automated Sentence Generation for a Spaced Repetition Software". *In Proceedings of Workshop on Innovative Use of NLP for Building Educational Applications 2024*

14. Heather Lent, Kushal Tatariya, Raj Dabre, Yiyi Chen, Marcell Fekete, Esther Ploeger, Li Zhou, Hans Erik Heje, Diptesh Kanojia, Paul Belony, Marcel Bollmann, Loïc Grobol, Miryam de Lhoneux, **Daniel Hershcovich**, Michel DeGraff, Anders Søgaard and Johannes Bjerva. "CreoleVal: Multilingual Multitask Benchmarks for Creoles". *In TACL, 2024*

15. Ali Al-Laith, Alexander Conroy, Jens Bjerring-Hansen and **Daniel Hershcovich**. "Development and Evaluation of Pre-trained Language Models for Historical Danish and Norwegian Literary Texts". *In Proceedings of LREC-COLING 2024*

16. Yong Cao, Ruixue Ding, Boli Chen, Xianzhi Li, Min Chen, **Daniel Hershcovich**, Pengjun Xie and Fei Huang. "Geo-Encoder: A Chunk-Argument Bi-Encoder Framework for Chinese Geographic Re-Ranking". *In Proceedings of EACL 2024*

17. Yong Cao, Min Chen and **Daniel Hershcovich**. "Bridging Cultural Nuances in Dialogue Agents through Cultural Value Surveys". *In Findings of EACL 2024*

18. Yong Cao, Yova Kementchedjhieva, Ruixiang Cui, Antonia Karamolegkou, Li Zhou, Megan Dare, Lucia Donatelli and **Daniel Hershcovich**. "Cultural Adaptation of Recipes". *In TACL, 2023*

19. Li Zhou, Antonia Karamolegkou, Wenyu Chen and **Daniel Hershcovich**. "Cultural Compass: Predicting Transfer Learning Success in Offensive Language Detection with Cultural Features". *In Findings of EMNLP 2023*

20. Nina Skovgaard Schneidermann, **Daniel Hershcovich** and Bolette Sandford Pedersen. "Probing for Hyperbole in Pre-Trained Language Models". *In Proceedings of the ACL Student Research Workshop (SRW) 2023*

21. Zi Wang and **Daniel Hershcovich**. "On Evaluating Multilingual Compositional Generalization with Translated Datasets". *In Proceedings of ACL 2023*

22. Ruixiang Cui, Seolhwa Lee, **Daniel Hershcovich** and Anders Søgaard. "What does the Failure to Reason with "Respectively" in Zero/Few-Shot Settings Tell Us about Language Models?". *In Proceedings of ACL 2023*

23. Simone Tedeschi, Johan Bos, Thierry Declerck, Jan Hajic, **Daniel Hershcovich**, Eduard H. Hovy, Alexander Koller, Simon Krek, Steven Schockaert, Rico Sennrich, Ekaterina Shutova and Roberto Navigli. "What's the Meaning of Superhuman Performance in Today's NLU?". *In Proceedings of ACL 2023*

24. Yong Cao, Xianzhi Li, huiwen liu, Wen Dai, Shuai Chen, Bin Wang, Min Chen and **Daniel Hershcovich**. "Pay More Attention to Relation Exploration for Knowledge Base Question Answering". *In Findings of ACL 2023*

25. Li Zhou, Laura Cabello, Yong Cao and **Daniel Hershcovich**. "Cross-Cultural Transfer Learning for Chinese Offensive Language Detection". *In Proceedings of the Workshop on Cross-Cultural Considerations in NLP, EACL 2023*

26. Yong Cao, Li Zhou, Seolhwa Lee, Laura Cabello, Min Chen and **Daniel Hershcovich**. "Assessing Cross-Cultural Alignment between ChatGPT and Human Societies: An Empirical Study". *In Proceedings of the Workshop on Cross-Cultural Considerations in NLP, EACL 2023*

27. Ali Al-Laith and Kirstine Nielsen Degn and Alexander Conroy and Bolette S. Pedersen and Jens Bjerring-Hansen and **Daniel Hershcovich**. "Sentiment Classification of Historical Danish and Norwegian Literary Texts". *In Proceedings of NoDaLiDa 2023*

28. Anders Søgaard, **Daniel Hershcovich** and Miryam de Lhoneux. "A Two-Sided Discussion of Preregistration of NLP Research". *In Proceedings of EACL 2023*

29. Marcus Astrup Hansen and **Daniel Hershcovich**. "A Dataset of Sustainable Diet Arguments on Twitter". *In Proceedings of the Workshop on NLP for Positive Impact 2022*

30. Nikolaus Schrack, Ruixiang Cui, Hugo A. López and **Daniel Hershcovich**. "Can AMR Assist Legal and Logical Reasoning?". *In Findings of EMNLP 2022*

31. **Daniel Hershcovich**, Nicolas Webersinke, Mathias Kraus, Julia Anna Bingler and Markus Leippold. "Towards Climate Awareness in NLP Research". *In Proceedings of EMNLP 2022*

32. Ruixiang Cui, Rahul Aralikatte, Heather Lent and **Daniel Hershcovich**. " Compositional Generalization in Multilingual Semantic Parsing over Wikidata". *In TACL, 2022*

33. Ruixiang Cui, **Daniel Hershcovich** and Anders Søgaard. "Generalized Quantifiers as a Source of Error in Multilingual NLU Benchmarks". *In Proceedings of NAACL 2022*

34. Stephanie Brandl, **Daniel Hershcovich** and Anders Søgaard. "Evaluating Deep Taylor Decomposition for Reliability Assessment in the Wild". *In Proceedings of ICWSM 2022*

35. **Daniel Hershcovich**, Stella Frank, Heather Lent, Miryam de Lhoneux, Mostafa Abdou, Stephanie Brandl, Emanuele Bugliarello, Laura Cabello Piqueras, Ilias Chalkidis, Ruixiang Cui, Constanza Fierro, Katerina Margatina, Phillip Rust and Anders Søgaard. "Challenges and Strategies in Cross-Cultural NLP". *In Proceedings of ACL 2022*

36. Tom Hope, Ronen Tamari, Hyeonsu Kang, **Daniel Hershcovich**, Joel Chan, Aniket Kittur and Dafna Shahaf. "Scaling Creative Inspiration with Fine-Grained Functional Facets of Product Ideas". *In Proceedings of CHI 2022*

37. Mareike Hartmann, Miryam de Lhoneux, **Daniel Hershcovich**, Yova Kementchedjhieva, Lukas Nielsen, Chen Qiu and Anders Søgaard. "A Multilingual Benchmark for Probing Negation-Awareness with Minimal Pairs". *In Proceedings of CoNLL 2021*

38. Mostafa Abdou, Artur Kulmizev, **Daniel Hershcovich**, Stella Frank, Ellie Pavlick and Anders Søgaard. "Can Language Models Encode Perceptual Structure Without Grounding? A Case Study in Color". *In Proceedings of CoNLL 2021*

39. Ruixiang Cui and **Daniel Hershcovich**. "Great Service! Fine-grained Parsing of Implicit Arguments". *In proceedings of IWPT 2021*

40. Nelson F. Liu, **Daniel Hershcovich**, Michael Kranzlein and Nathan Schneider. "Lexical Semantic Recognition". *In proceedings of MWE 2021*

41. **Daniel Hershcovich** and Lucia Donatelli. "It's the Meaning That Counts: The State of the Art in NLP and Semantics". *In Künstliche Intelligenz, 2021*

42. Rahul Aralikatte, Héctor Ricardo Murrieta Bello, **Daniel Hershcovich**, Marcel Bollmann, Anders Søgaard. "How far can we get with one GPU in 100 hours? CoAStaL at MultiIndicMT Shared Task". *MultiIndicMT Shared Task 2021*

43. Marcel Bollmann, Rahul Aralikatte, Héctor Murrieta Bello, **Daniel Hershcovich**, Miryam de Lhoneux, Anders Søgaard. "Moses and the Character-Based Random Babbling Baseline: CoAStaL at AmericasNLP 2021 Shared Task". *AmericasNLP Shared Task 2021*

44. Noam Slonim, Yonatan Bilu, Carlos Alzate, Roy Bar-Haim, Ben Bogin, Francesca Bonin, Leshem Choshen, Edo Cohen-Karlik, Lena Dankin, Lilach Edelstein, Liat Ein-Dor, Roni Friedman-Melamed, Assaf Gavron, Ariel Gera, Martin Gleize, Shai Gretz, Dan Gutfreund, Alon Halfon, **Daniel Hershcovich**, Ron Hoory, Yufang Hou, Shay Hummel, Michal Jacovi, Charles Jochim, Yoav Kantor, Yoav Katz, David Konopnicki, Zvi Kons, Lili Kotlerman, Dalia Krieger, Dan Lahav, Tamar Lavee, Ran Levy, Naftali Liberman, Yosi Mass, Amir Menczel, Shachar Mirkin, Guy Moshkowich, Shila Ofek-Koifman, Matan Orbach, Ella Rabinovich, Ruty Rinott, Slava Shechtman, Dafna Sheinwald, Eyal Shnarch, Ilya Shnayderman, Aya Soffer, Artem Spector, Benjamin Sznajder, Assaf Toledo, Orith Toledo-Ronen, Elad Venezian and Ranit Aharonov. "An autonomous debating system". *In Nature, 2021*

45. Rahul Aralikatte, Mostafa Abdou, Heather Lent, **Daniel Hershcovich** and Anders Søgaard. "Joint Semantic Analysis with Document-Level Cross-Task Coherence Rewards". *In proceedings of AAAI 2021*

46. Omri Abend, Dotan Dvir, **Daniel Hershcovich**, Jakob Prange and Nathan Schneider. "Cross-lingual Semantic Representation for NLP with UCCA". *COLING 2020 tutorial*

47. Ruixiang Cui and **Daniel Hershcovich**. "Refining Implicit Argument Annotation For UCCA". *In proceedings of DMR 2020*

48. **Daniel Hershcovich**, Nathan Schneider, Dotan Dvir, Jakob Prange, Miryam de Lhoneux and Omri Abend. "Comparison by Conversion: Reverse-Engineering UCCA from Syntax and Lexical Semantics". *In proceedings of COLING 2020*

49. Stephan Oepen, Omri Abend, Lasha Abzianidze, Johan Bos, Jan Hajic, **Daniel Hershcovich**, Bin Li, Tim O'Gorman, Nianwen Xue and Daniel Zeman. "MRP 2020: The Second Shared Task on Cross-Framework and Cross-Lingual Meaning Representation Parsing.". *In proceedings of CoNLL 2020 MRP Shared Task*

50. Ofir Arviv, Ruixiang Cui and **Daniel Hershcovich**. "HUJI-KU at MRP 2020: Two Transition-based Neural Parsers". *In proceedings of CoNLL 2020 MRP Shared Task*

51. **Daniel Hershcovich**, Miryam de Lhoneux, Artur Kulmizev, Elham Pejhan and Joakim Nivre. "Køpsala: Transition-Based Graph Parsing via Efficient Training and Effective Encoding". *In proceedings of IWPT 2020 Shared Task*

52. Omri Abend, Jan Hajič, **Daniel Hershcovich**, Marco Kuhlmann, Stephan Oepen, Tim O'Gorman and Nianwen Xue. "MRP 2019: Cross-Framework Meaning Representation Parsing". *In proceedings of CoNLL 2019 MRP Shared Task*

53. **Daniel Hershcovich** and Ofir Arviv. "TUPA at MRP 2019: A Multi-Task Baseline System". *In proceedings of CoNLL 2019 MRP Shared Task*

54. Rahul Aralikatte, Heather Lent, Ana Valeria Gonzalez, **Daniel Hershcovich**, Chen Qiu, Anders Sandholm, Michael Ringgaard and Anders Søgaard. "Rewarding Coreference Resolvers for Being Consistent with World Knowledge". *In proceedings of EMNLP-IJCNLP 2019*

55. Leshem Choshen, Dan Eldad, **Daniel Hershcovich**, Elior Sulem and Omri Abend. "The Language of Legal and Illegal Activity on the Darknet". *In proceedings of ACL 2019*

56. Yonatan Bilu, Ariel Gera, **Daniel Hershcovich**, Benjamin Sznajder, Dan Lahav, Guy Moshkowich, Anael Malet, Assaf Gavron and Noam Slonim. "Argument Invention from First Principles". *In proceedings of ACL 2019*

57. **Daniel Hershcovich**, Zohar Aizenbud, Leshem Choshen, Elior Sulem, Ari Rappoport and Omri Abend. "SemEval 2019 Task 1: Cross-lingual Semantic Parsing with UCCA". *In proceedings of SemEval 2019*

58. **Daniel Hershcovich**, Assaf Toledo, Alon Halfon and Noam Slonim. "Syntactic Interchangeability in Word Embedding Models". *In proceedings of RepEval 2019*

59. **Daniel Hershcovich**, Omri Abend and Ari Rappoport. "Content Differences in Syntactic and Semantic Representations". *In proceedings of NAACL-HLT 2019*

60. **Daniel Hershcovich**, Omri Abend and Ari Rappoport. "Universal Dependency Parsing with a General Transition-Based DAG Parser". *In proceedings of CoNLL 2018 UD Shared Task*

61. **Daniel Hershcovich**, Omri Abend and Ari Rappoport. "Multitask Parsing Across Semantic Representations". *In proceedings of ACL 2018*

62. **Daniel Hershcovich**, Omri Abend and Ari Rappoport. "A Transition-Based Directed Acyclic Graph Parser for UCCA". *In proceedings of ACL 2017 (Outstanding Paper Award)*

63. Yonatan Bilu, **Daniel Hershcovich**, Noam Slonim. "Automatic Claim Negation: Why, How and When". *In proceedings of NAACL-HLT 2015*

64. Noam Slonim, Ran Levy, Yonatan Bilu, **Daniel Hershcovich** and Ehud Aharoni. "Context Dependent Claim Detection". *In proceedings of COLING 2014*

65. Ehud Aharoni, Carlos Alzate, Roy Bar-Haim, Yonatan Bilu, Lena Dankin, Iris Eiron, **Daniel Hershcovich**, Shay Hummel. "Claims on Demand–an Initial Demonstration of a System for Automatic Detection and Polarity Identification of Context Dependent Claims in Massive Corpora". *In proceedings of COLING 2014*

66. Ehud Aharoni, Anatoly Polnarov, Tamar Lavee, **Daniel Hershcovich**, Ran Levy, Ruty Rinott, Dan Gutfreund, Noam Slonim. "A Benchmark Dataset for Automatic Detection of Claims and Evidence in the Context of Controversial Topics". *In proceedings of ACL 2014*

67. Alon Adir, Dave Goodman, **Daniel Hershcovich**, Oz Hershkovitz, Bryan Hickerson, Karen Holtz, Wisam Kadry, Anatoly Koyfman, John Ludden, Charles Meissner, Amir Nahir, Randall R Pratt, Mike Schiffli, Brett St Onge, Brian Thompto, Elena Tsanko, Avi Ziv. "Verification of Transactional Memory in POWER8". *In proceedings of DAC 2014*

Patents

1. US Patent 10,013,470, "*Automatic construction of arguments.*" Granted. 8/2019.

2. US Patent 10,013,470, "*Automatic detection of claims with respect to a topic.*" Granted. 7/2018.

3. US Patent 9,753,916, "*Automatic generation of a speech by processing raw claims to a set of arguments.*" Granted. 9/2017.