CLASP Annual Report 2022

Sharid Loáiciga and Shalom Lappin

March 1, 2023

Contents

1 Introduction

CLASP has continued from strength to strength, maintaining its high level of research activity during 2022.

With the restrictions due to the Covid19 pandemic now lifted in most of the world, we have fully resumed in-person participation to conferences and also in-person visits of guest researchers to Gothenburg. CLASP researchers have produced a high number of papers presented in a variety of conferences both in Sweden and in international venues. Our annual conference, *(Dis)embodiment*, was a complete success with over 60 attendees both in person and via Zoom. The proceedings were published in the ACL Anthology with the sponsorship of the SIGSEM.

In 2022, there were also changes in staff. Two PhD students successfully defended, two Associate Senior Lecturers were appointed, and a new associate researcher joined CLASP. As we continue laying the foundations for the continuation of CLASP after the end of the VR grant, we expect to appoint additional Senior Lecturers. These appointments will reinforce the Master in Language Technology (MLT) education program which remains highly successful and running at full capacity. Furthermore, Senior members have secured additional external funding during the past year. This will generate new positions and promote changes to the current CLASP configuration.

2 CLASP Staff and Recruitment

Two positions for Associate Senior Lecturers were advertised in 2022 and subsequently filled by Sharid Loáiciga and Rasmus Blank. Hanna Edblom finished her temporary position as administrator in June, while Susanna Myyry has returned to her position as CLASP administrator at 75%. Nina Tahmasebi has become an Associate Researcher. She recently moved from the Department of Swedish, Multilinguality and Language Technology.

Concerning time-limited positions, as we approach the end of the grant, we do not expect to appoint anymore PhD students, but only post-doctoral researchers. We expect to recruit at least three post-docs to work on specific research projects that people at CLASP are pursuing. This will provide the resources for advancing existing research projects and initiatives, ensuring the completion of ongoing projects central to the cutting edge research of the group. In order to strengthen our education program, we are also in the middle of the recruitment process of one or more Senior Lecturers.

Our current staff is composed of:

Researchers:

Jean-Philippe Bernardy	Researcher in CLASP (Docent in Computer Science)

Rasmus Blanck	Associate Senior Lecturer in Computational Linguistics
Ellen Breitholtz	Associate Senior Lecturer in Linguistics in FLoV, researcher in CLASP
Robin Cooper	Senior Researcher at CLASP, Professor emeritus of Computational Linguistics
Simon Dobnik	Professor of Computational Linguistics
Christine Howes	Senior Lecturer in Computational Linguistics (Docent in Computational Linguistics)
Aram Karimi	AI researcher and programmer
Shalom Lappin	Professor, Senior Researcher, Director of CLASP
Staffan Larsson	Professor of Computational Linguistics
Sharid Loáiciga	Associate Senior Lecturer in Computational Linguistics, Associate Director of CLASP
Asad Sayeed	Senior Lecturer in Machine Learning (Docent in Computational Linguistics)

Post Doctoral Researchers:

Julian Grove

PhD Students:

Kathrein Abu-Kwaik	(completed in May 2022)
Alexander Berman	
Adam Ek	
Tewodros Gebreselassie	(on indefinite leave of absence)
Nikolai Ilinykh	
Vladislav Maraev	(completed in August 2022)
Bill Noble	
Sylvie Saget	
Vidya Somashekarappa	

Associate Researchers:

Stergios Chatzikyriakidis	Associate Director of CLASP until June 2021. He is currently Professor of Computational Linguistics at the University of Crete.
Alexander Clark	Researcher in computational linguistics specialising in grammatical inference, and theoretical and mathematical approaches to natural language.
Chris Fox	Previously Reader in Computer Science (Essex, UK), researcher in computational linguistics and formal semantics
Eleni Gregoromichelaki	Professor of Linguistics in the Department of Philosophy, Linguistics, and Theory of of Science at the University of Gothenburg.
Ruth Kempson	Fellow of the British Academy, Member of Academia Europaea, Professor Emerita of Linguistics, Philosophy Department, King's College London.
Nina Tahmasebi	Researcher in Computational Linguistics in FLoV. She recently joined us from the Department of Swedish, Multilingualism and Language Technology.

Administrators:

Hanna Edblom	(until June 2022)
Susanna Myyry	

3 Research Activities and Research Groups

3.1 Dialogue Group

The dialogue group have had a very successful year. Vlad Maraev successfully defended his thesis "Who is laughing now? Laughter-infused dialogue systems"[1] on August 29th. Maraev has since taken up a position as a postdoc in the Department of Applied IT. Staffan Larsson has received funding for a three year project from the Swedish Research Council (VR) on "Not Just Semantics: Word Meaning Negotiation in Social Media and Spoken Interaction" which will also bring Jenny Myrendal (a former PhD student in the department) in as a researcher at 50%. Myrendal will be a welcome member of the dialogue

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[1] https://gupea.ub.gu.se/handle/2077/72030

research group. Additionally, Christine Howes has secured a five year ERC Starting Grant on "Divergence and convergence in dialogue: The dynamic management of mismatches"[2]. This grant, due to start in May 2023 and worth 1.5 million euros, will see 2 new PhDs and 3 postdocs join the dialogue research group.

Research in the dialogue research group in 2022 continued to focus on dogwhistles in GRIPES[3]; dialogical reasoning in IncReD [4], which submitted its final report in September; and dialogues of people with a diagnosis of schizophrenia in DRiPS[5], which ended in December though still has a couple of journal articles in the pipeline. We have continued to collaborate extensively both locally and internationally (see publications), and continue to attend internationally acclaimed conferences and workshops to disseminate our work and encourage new collaborations. In September 2022, we were involved in CLASP's annual conference on (Dis)embodiment[6].

This year we welcomed Arash Eshghi (Heriot-Watt, Edinburgh) as a guest researcher and the dialogue reading group continues to meet fortnightly in a hybrid format. In 2022, several of the invited speakers were specifically relevant to research in the dialogue group, including Afra Alishahi, Maria Boritchev, Emil Carlsson, Devdatt Dubhashi, Elin McCready and Alessandra Zarcone.

3.2 Machine Learning, Cognitive Modeling, and Natural Language Processing Group

For the MLCMNLP group, this year was a year of rebuilding connections and opportunities that had slowed down during the pandemic. The MLCMNLP group played a key role in organizing the (Dis)embodiment conference as part of its on-going participation in wider debates on the limits of large language modeling. The conference was an overwhelming scientific success.

The group is continuing a robust agenda of external collaboration. Using machine learning to probe human semantic intuitions remains a core aspect of the agenda and close collaborations, resulting in multiple publications with collaborators at the University of Washington and Columbia University with a close examination of how neural models can be optimized for matching human thematic fit judgments as well as an expansion to lower-level semantic proto-roles. This collaboration has expanded to include people at the University of Rochester to develop new resources in training models for verb and frame semantics.

At the same time, collaboration with Saarland University in visual storytelling has proceeded with a journal article on a new visual storytelling resource to appear in 2023.

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[2] https://www.christinehowes.com/divcon
[3] https://www.gu.se/en/research/gripes-gothenburg-research-initiative-for-politically-emergent-systems
[4] http://www.christinehowes.com/IncReD
[5] http://www.christinehowes.com/DRiPS
[6] https://sites.google.com/view/disembodiment/home

Vidya Somashekarappa's Ph.D. work continues apace, with a close focus on gaze estimation in dialogue and new approaches to training models to recognize mutual gaze contexts in video.

After years of data collection, the GRIPES project is bearing fruit in terms of computational analysis, with a publication based on analyzing responses from a GRIPES-conducted Swedish citizen survey via Swedish BERT models. This work also resulted in an MA thesis in the MLT program, as well as another thesis (in preparation for conference publication) in analyzing Reddit data for political polarization and identity formation.

A still-pending grant application was submitted to the Swedish Energy Agency on the topic of applying active learning to model pre-training to reduce the data burden of training large language models. Several publications not mentioned in this report have either been accepted and will appear in 2023 or are still under review.

3.3 Probabilistic Natural Language Semantics (PNLS) and Type Theory Group

We have successfully edited a volume of articles for CSLI Publications (Bernardy, Blanck, et al. 2022a), that provides an overview of current developments in probabilistic syntax and semantics. The collection includes contributions from members of CLASP, and other researchers working on probabilistic approaches to natural language. The collection covers a broad range of methods and models, from small scale Bayesian methods with few parameters, to large-scale deep neural networks with millions of parameters. The intended audience is chiefly graduate students in formal linguistics, NLP, AI, and cognitive science, as well as more advanced researchers seeking to broaden their understanding of work in these areas. We expect the volume to go in press imminently.

In terms of type-theoretical approach to semantics, we have produced a novel account for dynamic semantics in terms of algebraic effects (Grove and Bernardy 2022a). Another foundational contribution of ours is a reformulation of probabilistic semantics in terms of the simply typed lambda calculus (Grove and Bernardy 2022b). This foundational work has already seen applications: we have used it to provide a novel reformulation of the RSA model which shows that they are functionally equivalent to an update of listener priors (Bernardy, Grove, and Howes 2022a).

Ongoing work, which we expect to be completed in 2023, aims at explaining the enthymematic aspects of dialogue (as analysed previously by Breitholtz) in terms of an unified framework of modalities for type-systems, developed earlier as part of the activities of this group (Abel and Bernardy 2020).

3.4 Cognitive Systems Group

The cognitive systems group worked on (i) computational models and machine learning of meaning representations for language, action and perception, (ii)

semantic models of language and perception, (iii) referring in visual dialogue, (iv) representation learning in language models, (v) multi-modal dialogue.

The group continued to meet every fortnight around a reading group for which students can also receive course credit. The group also started a working group on data collection and ethics, and are working together with researchers and teachers in Uppsala (Beáta Megyesi et al.) and Umeå (Hannah Devinney et al.) on an online module on ethics in NLP for masters and doctoral students. Members of the group also coordinated the proposal for the RESOURCEFUL Workshop on resources and representations for under-resourced languages and domains. The workshop will be co-located with the 24th Nordic Conference on Computational Linguistics (NoDaLiDa-2023).

The group has been joined by Elham Alighardash, a doctoral student from Bu-Ali Sina University (Iran) who works on visual question answering. Alighardash has obtained funding for a 6-month research visit. Kathrein Abu-Kwaik (co-supervised by Chatzikyriakidis and Dobnik) has successfully defended her doctoral thesis on 25 May 2022 with important work on representation learning in under-resourced scenarios. The group members also supervised several theses in the MLT programme leading to several publications.

Dobnik is a participating researcher in a 6-year project to establish a multi-site research environment on *Grandma Karl is 27 years old: automatic pseudonymisation of research data* (PI Elena Volodina from Department of Swedish, Multilingualism, and Language technology, University of Gothenburg; other participating researchers, Therese Lindström-Tiedemann from University of Helsinki and Xuan-Son Vu from Umeå University). Cooper, Dobnik, Gregoromichelaki, and colleagues from the Universitat Pompeu Fabra (Peter Sutton, Louise McNally, and Thomas Brochhagen) obtained an EUTOPIA grant from a consortium of European universities for a Connected Research Community (CRCs, a research initiation grant) for the LIHAI project (Linguistic interaction between humans and AI) on evaluation of large pre-trained language models which has lead to two very successful research workshops in the autumn (one in Barcelona and one in Gothenburg).

4 Scientific Activities (Conferences, Workshops, Seminars, and Speakers)

The **(Dis)embodiment conference** (September 15-16) was extremely successful, with over 60 participants combining in-person and online presence. The conference examined the role of grounding and embodiment in the context of large language models. At the same time that "large text corpus" models have unarguably boosted progress across many NLP applications, the limits of what they are actually able to learn are still not well understood. In particular, as they do not learn from the kinds of grounded interactions (environmental and social) that living humans learn from, the question at the heart of the conference was, how much can these systems be said to capture what living, embodied humans mean when they use language?

The invited keynotes were selected based on the pertinence of their work for the question of the conference, but also considering a balance between academia and industry, based at the national and international level. The keynote talks were given by Magnus Sahlgren (AI Sweden), *The Singleton Fallacy: why current critiques of language models miss the point*; Afra Alishahi (Tilburg University), *Getting closer to reality: Grounding and interaction in models of human language acquisition*; and, Felix Hill (DeepMind), *Three studies that show that artificial models of general intelligence learn better with language*.

We continue holding a **weekly research seminar**, now permanently in hybrid format. Whenever possible, it is preferable to have our guest speakers come and visit CLASP in person, but the alternative to give their talk online is always there as a practical alternative. Regardless of whether the speaker is present in person or online, we broadcast the seminar online via Zoom.

We strive to invite guest speakers from diverse affiliations, including both national and international institutions, whose work is relevant to the different areas of interest in CLASP. The seminar is also a forum for CLASP researchers to present ongoing work, and it gives the PhD students an opportunity to receive useful feedback.

The list of guests at the CLASP research seminar during 2022 includes:

- Marco Kuhlmann, University of Linköping. *Probing and Explaining Neural Language Models.*

- Alexander Clark, University of Gothenburg. *Dendrophilia squared.*

- Joakim Nivre, Uppsala University & RISE Research Institutes of Sweden. *Nucleus Composition in Transition-Based Dependency Parsing.*

- Sebastian Schuster, Saarland University. *Entity tracking in pre-trained language models.*

- Casey Kennington, Boise State University. *How Should Models of Language Meaning Learn?*

- Anna Lindahl, Arianna Masciolini, Ricardo Muñoz Sánchez & Stian Rødven-Eide, University of Gothenburg. *A gentle introduction to argument mining.*

- Alessandra Zarcone, University of Applied Sciences. *Conversational AI between hype and hope – A case for data- and human-centric approaches.*

- Emil Carlsson & Devdatt Dubhashi, Chalmers University. *Pragmatic Reasoning in Structured Signaling Games.*

- Elin McCready, Aoyama Gakuin University. *Dogwhistles: Masking, Vigilance, and Unmasking*

- Athanasios Tsanas, University of Edinburgh. *Biomedical speech signal processing: concepts, algorithms, and contemporary challenges*

- Yuval Marton, University of Washington. *Is more better? Is better always better? Where's the learning? The baffling case of computational thematic fit.*

- Bill Noble & Nikolai Ilinykh, University of Gothenburg. *Grounded Language Learning through Interaction.*

- Barbara Plank, IT University of Copenhagen. *Dependency Parsing and Information Extraction in Low-Resource Scenarios.*

- Aida Nematzadeh, Deep Mind. *On Evaluating Neural Representations.*

- Shane Steinert-Threlkeld, University of Washington. *Unnatural Language Semantics*

- Eva-Marie Bloom Ström, University of Gothenburg. *How do words get in order? the role of speaker-hearer interaction in languages of South Africa.*

- Maria Boritchev, Université de Lorraine. *Modeling Dialogue through the Question-Answer relationship.*

- Gregor Rettenegger, University of Gothenburg. *Reinforcing Spirals and Online Conflict.*

- Yuri Bizzoni, Aarhus University. *The happiness of readers. Fractal scaling of sentiment dynamics and the assessment of literary quality.*

- Tal Linzen, New York University. *Causal analysis of the syntactic representations of Transformers.*

- Afra Alishahi, Tilburg University. *Grounded language learning, from sounds and images to meaning.*

- Nikolai Ilinykh, University of Gothenburg. *On the Interplay between Language and Vision in Transformers: How Much of a "Multi-Modal Learning" Do We Observe?*

A detailed list of the seminar talks, including abstracts, may be found at:
`https://gu-clasp.github.io/event/?type=seminars&page=1`

5   PhD Program in Computational Linguistics

Our students continue to make excellent progress, with most of them presenting papers at major international conferences. Two PhD students completed the program and obtained their degree in the past year:

- Kathrein Abu-Kwaik (started November 2016 & completed in May 2022, first supervisor Stergios Chatzikyriakidis, second supervisor Simon Dobnik)

- Vladislav Maraev (started September 2017 & completed in August 2022, first supervisor Chris Howes, second supervisor Staffan Larsson, external advisor Jonathan Ginzburg from Université Paris-Cité).

We currently have five remaining active PhD students, most of whom are expected to finish during 2023. They are:

- Bill Noble (started September 2018 & expected April 2023, first supervisor Staffan Larsson, second supervisor Asad Sayeed)

- Adam Ek (started March 2019, first supervisor Jean-Philippe Bernardy, second supervisor Stergios Chatzikyriakidis)

- Vidya Somashekarappa (started January 2019, first supervisor Asad Sayeed, second supervisor Chris Howes)

- Nikolai Ilinykh (started February 2020, first supervisor Simon Dobnik, second supervisor, Asad Sayeed)

- Alexander Berman (started October 2021, first supervisor Chris Howes, second supervisor Jean-Philippe Bernardy)

The remaining students are:

- Axel Almquist (started January 2020, first supervisor Asad Sayeed, second supervisor Simon Dobnik, on indefinite leave of absence)

- Tewodros Gebreselassie (started January 2020, on indefinite leave of absence, first supervisor Simon Dobnik, second supervisor, Stergios Chatzikyriakidis)

6 Budget

As can be seen in our budget spreadsheet, we continue to run a significant budget surplus, much of which is due to the success our staff have had getting additional external funding. In spring 2023, we will therefore be advertising for a number of post doctoral researchers to join CLASP for the final two years. Our travel spending has significantly increased post pandemic, as expected. We have also acquired some big equipment items in 2022, including a new server with two GPU cards and 32 CPU cores, and a Furhat robot which is already being used in experiments by Vidya Somashekarappa, one of our PhD students.

7 CLASP Alumni

We have news from one of our alumni:

Aleksandre Maskharashvili

In August 2022, Aleksandre started a new job at The Ohio State University (OSU) as a Visiting Assistant Professor of computational linguistics, for the academic year 2022-2023.

In 2022, together with colleagues OSU, Aleksandre focuses on dialogue modeling, with interests in the issues of natural language generation, its discourse and contextual coherence.

Refereed Publications

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili (2022a). "Bayesian Inference Semantics for Natural Language". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Stanford CA: CSLI Publications.

Stevens-Guille, Symon, Aleksandre Maskharashvili, Xintong Li, and Michael White (Sept. 2022). "Generating Discourse Connectives with Pre-trained Language Models: Conditioning on Discourse Relations Helps Reconstruct the PDTB". In: *Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue*. Edinburgh, UK: Association for Computational Linguistics, pp. 500–515. URL: https://aclanthology.org/2022.sigdial-1.48.

Our other alumni are:

Wafia Adouane

Yuri Bizzoni

Mehdi Ghanimifard

Charalambos Themistocleous

8 Plans for 2023

At the time of writing of this report (February, 2023), Shalom Lappin stepped down as Director in order to focus on his health, following triple bypass cardiac surgery. He will continue to be associated to CLASP as Chief Scientist. The new configuration will also include Robin Cooper as Acting Head and Sharid Loáiciga as Coordination Director, supported by Christine Howes who is the Head of Research at FLoV. As CLASP has been operating for several years now, we have routines and policies in place that will ensure a smooth transition of roles.

8.1 Annual Conference and Workshops

The organization for the CLASP annual conference is underway with the topic *Learning with Small Data*. The conference will foster discussions about the

sustainability of current state of the art methods in computational linguistics which rely on very large models, such as GPT2-3, BERT, and XLNet.[7] It is scheduled for September 11-12, 2022, and our first call for papers has already been published. Unlike previous years, we did not seek SIGSEM sponsorship, but will be publishing the proceedings in the ACL Anthology directly as a CLASP conference. The invited keynote speakers have already been confirmed: Aurélie Herbelot (University of Trento), Tal Linzen (New York University & Google), and Danielle Matthews (University of Sheffield).

8.2 Scientific Visitors and Participation in Conferences:

In addition to international guests whose work is relevant to our areas of interest, we expect all CLASP scientific advisers to have visited CLASP at the end of 2023. We also expect to continue participating in high impact international conferences.

9 Appendix: Publications, Talks, and Other Scientific Activities

Total Outputs by Publication Category:
Thesis.. 2
Chapters in Books... 6
Refereed Journal Articles..................................... 5
Refereed Conference Papers.............................. 48
ArXiv and other non-archival publications..... 17
Edited Collection or Proceedings 5

Kathrein Abu-Kwaik

Refereed Publications

Abu Kwaik, Kathrein (2022). "Resources and Applications for Dialectal Arabic: the Case of Levantine". PhD thesis. University of Gothenburg.

Abu Kwaik, Kathrein, Stergios Chatzikyriakidis, and Simon Dobnik (June 2022a). "Pre-trained Models or Feature Engineering: The Case of Dialectal Arabic". In: *Proceedinsg of the 5th Workshop on Open-Source Arabic Corpora and Processing Tools with Shared Tasks on Qur'an QA and Fine-Grained Hate Speech Detection (OSACT) at LREC 2022*. Marseille, France: European Language Resources Association, pp. 41–50. URL: https://gup.ub.gu.se/publication/323066?lang=en.

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[7]https://sites.google.com/view/learning-with-small-data/home

Alex Berman

Together with his supervisors, Alex conceived of a web-based experiment for collecting human explanatory dialogues revolving around model predictions. He developed software for the experiment and conducted a pilot study resulting in a poster and extended abstract presented at SemDial in Dublin. As a step towards scaling up the experiment and involving a broader range of participants, an application for ethical review was submitted.

Together with his supervisors and Ellen Breitholtz, Alex sketched a novel method for explaining model predictions in dialogue using enthymematic counterfactuals, resulting in a short paper presented at the workshop BEWARE (co-located with AIxIA, Udine).

Alex also proceeded with his case study of an AI-based decision-support system used by the Swedish public employment service. A collaboration with two researchers from Chalmers and School of Public Administration at GU was formed, with plans to write and submit a paper in 2023.

Together with Staffan Larsson and MLT student Ranim Khojah, an evaluation of confidence calibration of intent classifiers for dialogue systems was performed, resulting in a paper presented at SIGDIAL in Edinburgh.

Refereed Publications

Berman, Alexander, Ellen Breitholtz, Jean-Philippe Bernardy, and Christine Howes (2022). "Explaining Predictions with Enthymematic Counterfactuals". In: *Proceedings of the 1st Workshop on Bias, Ethical AI, Explainability and the role of Logic and Logic Programming, BEWARE-22*, pp. 95–100.

Khojah, Ranim, Alexander Berman, and Staffan Larsson (Sept. 2022). "Evaluating N-best Calibration of Natural Language Understanding for Dialogue Systems". In: *Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue*. Edinburgh, UK: Association for Computational Linguistics, pp. 582–594. URL: https://aclanthology.org/2022.sigdial-1.54.

Non-archival Publications

Berman, Alexander and Christine Howes (2022). "Apparently acousticness is positively correlated with neuroticism : Conversational explanations of model predictions". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial) - Poster Abstracts*, pp. 233–235. URL: https://www.christinehowes.com/papers/Berman.Howes_SEMDIAL_2022.pdf.

Talks

Berman, Alexander (2022). *Kan vi lita på AI? (Can we trust AI?)* Vetenskapsfestivalen.

Refereeing

SemDial 2022
(Dis)embodiment 2022

Jean-Philippe Bernardy

The bulk of Bernardy's work in 2022 consisted in the definition, implementation, analysis of Unitary Recurrent Neural networks, as well as experimental work carried out using them. (Bernardy and Lappin 2022d; Bernardy and Lappin 2022e; Bernardy and Lappin 2022a) This work has been the subject of two contributed talks at ESSLLI 2022. Besides, in addition to work in the Type-Theory and PNLS group (see above), Bernardy continues to nurture collaboration in the foundational aspect of type-theory and algebra (Jansson, Ionescu, and Bernardy 2022; Spiwack et al. 2022).

Refereed Publications

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: https://aclanthology.org/2022.dclrl-1.6.

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili (2022a). "Bayesian Inference Semantics for Natural Language". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Stanford CA: CSLI Publications.

Bernardy, Jean-Philippe, Julian Grove, and Christine Howes (2022a). "Rational Speech Act models are utterance-independent updates of world priors". In: *Proceedings of SemDial 2022 (DubDial): The 26th Workshop on the Semantics and Pragmatics of Dialogue*.

Bernardy, Jean-Philippe and Shalom Lappin (2022a). "A Neural Model for Compositional Word Embeddings and Sentence Processing". In: *Proceedings of The Workshop on Cognitive Modeling and Computational Linguistics*. Association for Computational Linguistics. DOI: 10.18653/v1/2022.cmcl-1.2. URL: https://aclanthology.org/2022.cmcl-1.2/.

Bernardy, Jean-Philippe and Shalom Lappin (2022d). "Assessing the Unitary RNN as an End-to-End Compositional Model of Syntax". In: *End-to-End Compositional Models of Vector-Based Semantics*. Ed. by Michael Moortgat and Gijs Wijnholds. Vol. 366. Electronic Proceedings in Theoretical Computer Science. Open Publishing Association, pp. 9–22. DOI: 10.4204/EPTCS.366.4.

Grove, Julian and Jean-Philippe Bernardy (2022a). "Algebraic Effects for Extensible Dynamic Semantics". In: *Journal of Logic, Language and Information*, pp. 1–27. DOI: 10.1007/s10849-022-09378-7.

— (2022b). "Probabilistic compositional semantics, purely". In: *Proceedings of JSAI-isAI 2021/LENLS18*.

Jansson, Patrik, Cezar Ionescu, and Jean-Philippe Bernardy (2022). *Domain-Specific Languages of Mathematics*. College Publications. ISBN: 978-1848903883.

Noble, Bill and Jean-Philippe Bernardy (Dec. 2022). "Conditional Language Models for Community-Level Linguistic Variation". In: *Proceedings of the 5th Workshop on NLP+CSS at EMNLP 2022*. Abu Dabi, p. 20. URL: https://aclanthology.org/venues/nlpcss/.

Spiwack, Arnaud, Csongor Kiss, Jean-Philippe Bernardy, Nicolas Wu, and Richard A. Eisenberg (2022). "Linearly Qualified Types: Generic inference for capabilities and uniqueness". In: *PACMPL* 6.ICFP.

Edited Collections

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili, eds. (2022b). *Probabilistic Approaches to Linguistic Theory*. Stanford CA: CSLI Publications.

Lappin, Shalom and Jean-Philippe Bernardy, eds. (2022). *Algebraic Structures in Natural Language*. Boca Raton, Oxford: Taylor and Francis, CRC Press.

Rasmus Blanck

Refereed Publications

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili (2022a). "Bayesian Inference Semantics for Natural Language". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Stanford CA: CSLI Publications.

Edited Collection

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili, eds. (2022b). *Probabilistic Approaches to Linguistic Theory*. Stanford CA: CSLI Publications.

Other scientific activites:

- External reviewer for the *National Science Center*, Poland.

- Referee for *Theoretical Computer Science* and *Journal of Logic, Language and Information*.

Ellen Breitholtz

Refereed Publications

Berman, Alexander, Ellen Breitholtz, Jean-Philippe Bernardy, and Christine Howes (2022). "Explaining Predictions with Enthymematic Counterfactuals". In: *Proceedings of the 1st Workshop on Bias, Ethical AI, Explainability and the role of Logic and Logic Programming, BEWARE-22*, pp. 95–100.

Breitholtz, Ellen and Robin Cooper (Sept. 2022). "Memory grounding implicit messages". In: *Proceedings of the Workshop on Semantics, Memory and Emotion*. Paris, France.

Decker, Amandine, Maxime Amblard, and Ellen Breitholtz (June 2022). "Modelling topics and topic shifts in dialogue". In: *Semantics, Memory and Emotion 2022*. Ed. by Andy Lücking and Jonathan Ginzburg. The University of Chicago Center in Paris.

Hertzberg, Niclas, Robin Cooper, Elina Lindgren, Björn Rönnerstrand, Gregor Rettenegger, Ellen Breitholtz, and Asad Sayeed (July 2022). "Distributional properties of political dogwhistle representations in Swedish BERT". In: *Proceedings of the Sixth Workshop on Online Abuse and Harms (WOAH)*. Seattle, Washington (Hybrid): Association for Computational Linguistics, pp. 170–175. DOI: 10.18653/v1/2022.woah-1.16. URL: https://aclanthology.org/2022.woah-1.16.

Noble, Bill, Vladislav Maraev, and Ellen Breitholtz (Dec. 2022). "Probabilistic Pragmatics: A Dialogical Perspective". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Center for the Study of Language and Information, pp. 227–259. ISBN: 978-1-68400-079-1.

Non-archival Publications

Breitholtz, Ellen and Christine Howes (2022). "'He hasn't done much to keep it up': Annotating topoi in the balloon task". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial) - Poster Abstracts*, pp. 224–226. URL: https://www.christinehowes.com/papers/Breitholtz.Howes_SEMDIAL_2022.pdf.

Stergios Chatzikyriakidis

Refereed Publications

Abu Kwaik, Kathrein, Stergios Chatzikyriakidis, and Simon Dobnik (June 2022b). "Pre-trained Models or Feature Engineering: The Case of Dialectal Arabic". In: *Proceedinsg of the 5th Workshop on Open-Source Arabic Corpora and Processing Tools with Shared Tasks on Qur'an QA and Fine-Grained Hate Speech*

Detection. Marseille, France: European Language Resources Association, pp. 41–50. URL: https://aclanthology.org/2022.osact-1.5.

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: https://aclanthology.org/2022.dclrl-1.6.

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili (2022a). "Bayesian Inference Semantics for Natural Language". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Stanford CA: CSLI Publications.

Talman, Aarne, Marianna Apidianaki, Stergios Chatzikyriakidis, and Jörg Tiedemann (July 2022). "How Does Data Corruption Affect Natural Language Understanding Models? A Study on GLUE datasets". In: *Proceedings of the 11th Joint Conference on Lexical and Computational Semantics*. Seattle, Washington: Association for Computational Linguistics, pp. 226–233. DOI: 10.18653/v1/2022.starsem-1.20. URL: https://aclanthology.org/2022.starsem-1.20.

Edited Collection and Conference Proceedings

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili, eds. (2022b). *Probabilistic Approaches to Linguistic Theory*. Stanford CA: CSLI Publications.

Chatzikyriakidis, Stergios and Rainer Osswald, eds. (July 2021). *Proceedings of the ESSLLI 2021 Workshop on Computing Semantics with Types, Frames and Related Structures*. Utrecht, The Netherlands (online): Association for Computational Linguistics. URL: https://aclanthology.org/2021.cstfrs-1.0.

Kalouli, Aikaterini-Lida and Stergios Chatzikyriakidis, eds. (Aug. 2022). *Proceedings of the 3rd Natural Logic Meets Machine Learning Workshop (NALOMA III)*. Galway, Ireland: Association for Computational Linguistics. URL: https://aclanthology.org/2022.naloma-1.0.

Grants

Robin Cooper

Refereed Publications

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: `https://aclanthology.org/2022.dclrl-1.6`.

Breitholtz, Ellen and Robin Cooper (Sept. 2022). "Memory grounding implicit messages". In: *Proceedings of the Workshop on Semantics, Memory and Emotion*. Paris, France.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: `https://aclanthology.org/2022.clasp-1.4`.

Hertzberg, Niclas, Robin Cooper, Elina Lindgren, Björn Rönnerstrand, Gregor Rettenegger, Ellen Breitholtz, and Asad Sayeed (July 2022). "Distributional properties of political dogwhistle representations in Swedish BERT". In: *Proceedings of the Sixth Workshop on Online Abuse and Harms (WOAH)*. Seattle, Washington (Hybrid): Association for Computational Linguistics, pp. 170–175. DOI: `10.18653/v1/2022.woah-1.16`. URL: `https://aclanthology.org/2022.woah-1.16`.

Noble, Bill, Staffan Larsson, and Robin Cooper (Aug. 2022a). "Classification Systems: Combining Taxonomical and Perceptual Lexical Meaning". In: *Proceedings of the 3rd Natural Logic Meets Machine Learning Workshop (NALOMA III)*. Galway, Ireland: Association for Computational Linguistics, pp. 11–16. URL: `https://aclanthology.org/2022.naloma-1.2`.

— (Aug. 2022b). "Coordinating Taxonomical and Observational Meaning: The Case of Genus-Differentia Definitions". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. URL: `http://semdial.org/anthology/papers/Z/Z22/Z22-3020`.

Publications from 2021 too late to be included in last year's report

Howes, Christine, Ellen Breitholtz, Mary Lavelle, and Robin Cooper (Sept. 2021). "Justifiable reasons for everyone: Dialogical reasoning in patients with schizophrenia". In: *Proceedings of the 25th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. Potsdam, Germany: SEMDIAL. URL: `http://semdial.org/anthology/Z21-Howes_semdial_0009.pdf`.

Larsson, Staffan and Robin Cooper (June 2021). "Bayesian Classification and Inference in a Probabilistic Type Theory with Records". In: *Proceedings of the 1st and 2nd Workshops on Natural Logic Meets Machine Learning (NALOMA)*.

Groningen, the Netherlands (online): Association for Computational Linguistics, pp. 51–59. URL: https://aclanthology.org/2021.naloma-1.7.

Refereeing

SALT 32 (Semantics and Linguistic Theory) 2022
*SEM (Computational Semantics) 2022
ISA (Workshop on Interoperable Semantic Annotation) (at LREC) 2022
NALOMA (Natural Logic Meets Machine Learning) workshop ESSLLI 2022
(Dis)embodiment, CLASP workshop 2022
SemDial (Semantics and Pragmatics of Dialogue) 2022
Semantics, memory and emotion workshop (Paris) 2022
Journal of Logic, Language and Information 2022
Research Foundation Flanders (FWO) through ESF 2022

Editorial

Editorial board Journal of Semantics 2016-
Editorial board IfCoLog Journal of Logics and their Applications
Consulting editor for Journal of Logic, Language and Information
Editorial board Cambridge Elements in Semantics 2021-

Invited talks at international conferences and workshops

Invited talk at International Workshop on Type Theory: Using types to represent mental states and points of view. West Anhui University and Xiangtan University, China (online) 25th-26th June, 2022
Invited talk at NALOMA workshop (Natural logic meets machine learning): Natural Reasoning, Natural Logic and the Semantic Data Problem, ESSLLI, University of Galway, Ireland, 8th-12th August, 2022

Academy membership – selected fellowships in professional associations

Fellow of the British Academy (1993–)
Fellow of the Royal Society of Arts and Sciences in Gothenburg (1996–)
Member of Academia Europaea (2009–)

Simon Dobnik

Refereed Publications

Abu Kwaik, Kathrein, Stergios Chatzikyriakidis, and Simon Dobnik (June 2022a). "Pre-trained Models or Feature Engineering: The Case of Dialectal Arabic". In: *Proceedinsg of the 5th Workshop on Open-Source Arabic Corpora and Processing Tools with Shared Tasks on Qur'an QA and Fine-Grained Hate Speech Detection (OSACT) at LREC 2022*. Marseille, France: European Lan-

guage Resources Association, pp. 41–50. URL: https://gup.ub.gu.se/publication/323066?lang=en.

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: https://aclanthology.org/2022.dclrl-1.6.

Dannélls, Dana, Tiago Timponi Torrent, Natalia Sathler Sigiliano, and Simon Dobnik (Nov. 2022). "Beyond strings of characters: Resources meet NLP – Again". In: *LIVE and LEARN - Festschrift in honor of Lars Borin*. Ed. by Elena Volodina, Dana Dannélls, Aleksandrs Berdicevskis, Markus Forsberg, and Shafqat Virk. Vol. GU-ISS-2022-03. Research Reports from the Department of Swedish, Multilingualism, Language Technology. Gothenburg, Sweden: University of Gothenburg, pp. 29–36. URL: https://gup.ub.gu.se/publication/321730?lang=en.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: https://aclanthology.org/2022.clasp-1.4.

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Aug. 2022b). "What to refer to and when? Reference and re-reference in two language-and-vision tasks". In: *Proceedings of DubDial - Semdial 2022: The 26th Workshop on the Semantics and Pragmatics of Dialogue*. Ed. by Eleni Gregoromichelaki, Julian Hough, and John D. Kelleher. Proceedings (SemDial). Dublin, Ireland, pp. 146–159. URL: https://gup.ub.gu.se/publication/323053?lang=en.

Ilinykh, Nikolai, Rafal Černiavski, Eva Elžbieta Sventickaitė, Viktorija Buzaitė, and Simon Dobnik (June 2022a). "Examining the Effects of Language-and-Vision Data Augmentation for Generation of Descriptions of Human Faces". In: *Proceedings of the 2nd Workshop on People in Vision, Language, and the Mind (P-VLAM 2022) at LREC 2022*. Ed. by Patrizia Paggio, Albert Gatt, and Marc Tanti. Marseille, France: European Language Resources Association, pp. 26–40. URL: https://gup.ub.gu.se/publication/317538?lang=en.

Ilinykh, Nikolai and Simon Dobnik (May 2022a). "Attention as Grounding: Exploring Textual and Cross-Modal Attention on Entities and Relations in Language-and-Vision Transformer". In: *Findings of the Association for Computational Linguistics: ACL 2022*. Association for Computational Linguistics. Dublin, Ireland, pp. 4062–4073. URL: https://gup.ub.gu.se/publication/317460?lang=en.

— (Dec. 2022c). "Do Decoding Algorithms Capture Discourse Structure in Multi-Modal Tasks? A Case Study of Image Paragraph Generation". In: *Proceedings of the 2nd Workshop on Natural Language Generation, Evaluation, and Metrics (GEM)*. Ed. by Antoine Bosselut, Khyathi Chandu, Kaustubh Dhole, Varun Gangal, Sebastian Gehrmann, Yacine Jernite, Jekaterina Novikova,

and Laura Perez-Beltrachini. Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, pp. 480–493. URL: `https://gup.ub.gu.se/publication/323067?lang=en`.

Ilinykh, Nikolai, Yasmeen Emampoor, and Simon Dobnik (July 2022a). "Look and Answer the Question: On the Role of Vision in Embodied Question Answering". In: *Proceedings of the 15th International Conference on Natural Language Generation*. Ed. by Samira Shaikh, Thiago Ferreira, and Amanda Stent. Waterville, Maine, USA and virtual meeting: Association for Computational Linguistics, pp. 236–245. URL: `https://gup.ub.gu.se/publication/317540?lang=en`.

Kelleher, John D. and Simon Dobnik (Dec. 2022). "Distributional semantics for situated spatial language? Functional, geometric and perceptual perspectives". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. CSLI Publications. Stanford university, Stanford, California, USA: Center for the Study of Language and Information, The University of Chicago Press, pp. 319–356. URL: `https://gup.ub.gu.se/publication/317474?lang=en`.

Loáiciga, Sharid, Simon Dobnik, and David Schlangen (Oct. 2022a). "Anaphoric Phenomena in Situated dialog: A First Round of Annotations". In: *Proceedings of the Fifth Workshop on Computational Models of Reference, Anaphora and Coreference (CRAC)*. Ed. by Maciej Ogrodniczuk, Sameer Pradhan, Anna Nedoluzhko, Vincent Ng, and Massimo Poesio. Gyeongju, Republic of Korea: Association for Computational Linguistics, pp. 31–37. URL: `https://gup.ub.gu.se/publication/321484?lang=en`.

Non-archival Publications and Talks

Dobnik, Simon (Dec. 2022a). *Computational Generation and Interpretation of Spatial Descriptions*. Position paper following the Representing and Solving Spatial Problems (Dagstuhl Seminar 21492). Dagstuhl, Germany: Schloss Dagstuhl – Leibniz-Zentrum für Informatik. URL: `https://gup.ub.gu.se/publication/323813?lang=en`.

— (July 2022b). "Neat and Scruffy: On Computational Generation and Interpretation of Spatial Descriptions". In: *Proceedings of the 1st International Workshop on Spatio-Temporal Reasoning and Learning (STRL 2022) co-located with the 31st International Joint Conference on Artificial Intelligence and the 25th European Conference on Artificial Intelligence (IJCAI 2022, ECAI 2022)*. Ed. by Michael Sioutis, Zhiguo Long, John Stell, and Jochen Renz. Vol. Vol-3190. Vienna, Austria: CEUR Workshop Proceedings (CEUR-WS.org), p. 1. URL: `https://gup.ub.gu.se/publication/323785?lang=en`.

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Nov. 2022a). "Towards a computational model of reference and re-reference in visual scenes". In: *Proceedings of the 9th Swedish Language Technology Conference (SLTC)*. Ed. by Jens Edlund. Stockholm, Sweden: The division of Speech, Music & Hearing and Språkbanken Tal, KTH Royal Institute of Technology, pp. 1–7. URL: `https://gup.ub.gu.se/publication/323784?lang=en`.

Dobnik, Simon and Aram Karimi (Aug. 2022). "Chat-o-matic: an online chat tool for collecting conversations of situated dialogue". In: *Proceedings of*

DubDial - Semdial 2022: The 26th Workshop on the Semantics and Pragmatics of Dialogue – Poster Abstracts. Ed. by Eleni Gregoromichelaki, Julian Hough, and John D. Kelleher. Proceedings (SemDial). Dublin, Ireland, pp. 1–3. URL: `https://gup.ub.gu.se/publication/323057?lang=en`.

Ilinykh, Nikolai and Simon Dobnik (Nov. 2022d). "Hallucinate or ground: how general or specific are object descriptions generated by a vision-and-language transformer?" In: *Proceedings of the 9th Swedish Language Technology Conference (SLTC)*. Ed. by Jens Edlund. Stockholm, Sweden: The division of Speech, Music & Hearing and Språkbanken Tal, KTH Royal Institute of Technology, pp. 1–6. URL: `https://gup.ub.gu.se/publication/323801?lang=en`.

Edited Conference Proceedings

Dobnik, Simon, Julian Grove, and Asad Sayeed, eds. (Sept. 2022). *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. 4. Special Interest Group on Computational Semantics (SIGSEM). Gothenburg, Sweden: The Association for Computer Linguistics (ACL). URL: `https://gup.ub.gu.se/publication/322913?lang=en`.

Adam Ek

Refereed Publications

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: `https://aclanthology.org/2022.dclrl-1.6`.

Batsuren, Khuyagbaatar, Omer Goldman, Salam Khalifa, Nizar Habash, Witold Kieraś, Gábor Bella, Brian Leonard, Garrett Nicolai, Kyle Gorman, Yustinus Ghanggo Ate, Maria Ryskina, Sabrina Mielke, Elena Budianskaya, Charbel El-Khaissi, Tiago Pimentel, Michael Gasser, William Abbott Lane, Mohit Raj, Matt Coler, Jaime Rafael Montoya Samame, Delio Siticonatzi Camaiteri, Esaú Zumaeta Rojas, Didier López Francis, Arturo Oncevay, Juan López Bautista, Gema Celeste Silva Villegas, Lucas Torroba Hennigen, Adam Ek, David Guriel, Peter Dirix, Jean-Philippe Bernardy, Andrey Scherbakov, Aziyana Bayyr-ool, Antonios Anastasopoulos, Roberto Zariquiey, Karina Sheifer, Sofya Ganieva, Hilaria Cruz, Ritván Karahóǧa, Stella Markantonatou, George Pavlidis, Matvey Plugaryov, Elena Klyachko, Ali Salehi, Candy Angulo, Jatayu Baxi, Andrew Krizhanovsky, Natalia Krizhanovskaya, Elizabeth Salesky, Clara Vania, Sardana Ivanova, Jennifer White, Rowan Hall Maudslay, Josef Valvoda, Ran Zmigrod, Paula Czarnowska, Irene Nikkarinen, Aelita Salchak, Brijesh Bhatt, Christopher Straughn, Zoey Liu, Jonathan

North Washington, Yuval Pinter, Duygu Ataman, Marcin Wolinski, Totok Suhardijanto, Anna Yablonskaya, Niklas Stoehr, Hossep Dolatian, Zahroh Nuriah, Shyam Ratan, Francis M. Tyers, Edoardo M. Ponti, Grant Aiton, Aryaman Arora, Richard J. Hatcher, Ritesh Kumar, Jeremiah Young, Daria Rodionova, Anastasia Yemelina, Taras Andrushko, Igor Marchenko, Polina Mashkovtseva, Alexandra Serova, Emily Prud'hommeaux, Maria Nepomniashchaya, Fausto Giunchiglia, Eleanor Chodroff, Mans Hulden, Miikka Silfverberg, Arya D. McCarthy, David Yarowsky, Ryan Cotterell, Reut Tsarfaty, and Ekaterina Vylomova (June 2022). "UniMorph 4.0: Universal Morphology". In: *Proceedings of the Thirteenth Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 840–855. URL: https://aclanthology.org/2022.lrec-1.89.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: https://aclanthology.org/2022.clasp-1.4.

Invited Talk

Ek, Adam (2022). Talk at University of Crete, November 18th.

Joint research

Currently working on a paper with Hanna Augustin and Dick Kasperowski.

Julian Grove

I am currently a post-doctoral researcher in the FACTS.lab, directed by Aaron Steven White, at the University of Rochester, where I am applying the continuations-based system for Bayesian semantics that I worked on with Jean-Philippe Bernardy at CLASP to computational modeling problems.

Refereed Publications

Grove, Julian and Jean-Philippe Bernardy (2022a). "Algebraic Effects for Extensible Dynamic Semantics". In: *Journal of Logic, Language and Information*, pp. 1–27. DOI: 10.1007/s10849-022-09378-7.

— (2022b). "Probabilistic compositional semantics, purely". In: *Proceedings of JSAI-isAI 2021/LENLS18*.

Edited Conference Proceedings

Dobnik, Simon, Julian Grove, and Asad Sayeed, eds. (Sept. 2022). *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. 4. Special Interest Group

on Computational Semantics (SIGSEM). Gothenburg, Sweden: The Association for Computer Linguistics (ACL). URL: https://gup.ub.gu.se/publication/322913?lang=en.

Activities at CLASP

- Probabilities for the stubborn semanticist. Invited talk at the Manchester Forum in Linguistics, Department of Linguistics and English Language, the University of Manchester.

- Rational Speech Act models are utterance-independent updates of world priors. Talk given at SemDial 2022 (DubDial).

- Type theory and effect systems in computational semantics. Course taught at the University of Gothenburg.

Christine Howes

Refereed Publications

Berman, Alexander, Ellen Breitholtz, Christine Howes, and Jean-Philippe Bernardy (2022). "Explaining predictions with enthymematic counterfactuals". In: *Proceedings of BEWARE Workshop at AIxIA*. URL: http://www.christinehowes.com/papers/Berman.etal_BEWARE_2022.pdf.

Bernardy, Jean-Philippe, Julian Grove, and Christine Howes (2022c). "Rational Speech Act models are utterance-independent updates of world priors". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial)*, pp. 106–115. URL: https://www.christinehowes.com/papers/Bernardy.Grove.Howes_SEMDIAL_2022.pdf.

Eshghi, Arash, Christine Howes, and Eleni Gregoromichelaki (2023). "Action coordination and learning in dialogue". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by J-P Bernardy, R Blanck, S Chatzikyriakidis, S Lappin, and A Maskharashvili. Probabilistic Approaches to Linguistic Theory. In Press. CSLI Publications, pp. 361–422. URL: https://www.christinehowes.com/papers/Eshghi.etal_Probabilistic_dialogue_Draft_2022.pdf.

Gregoromichelaki, Eleni, Arash Eshghi, Christine Howes, Gregory J. Mills, Ruth Kempson, Julian Hough, Patrick G. T. Healey, and Matthew Purver (2022). "Language and cognition as distributed process and interactions". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial)*, pp. 160–171. URL: https://www.christinehowes.com/papers/Gregoromichelaki.etal_SEMDIAL_2022.pdf.

Howes, Christine (2022b). "Putting the dialogue into dialogue modelling - Invited talk". In: *Proceedings of the Young Researchers Roundtable on Spoken Dialogue Systems*. Invited talk.

Somashekarappa, Vidya, Christine Howes, and Asad Sayeed (2022a). "Mutual gaze detection and estimation: Towards human-robot interaction". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial) - Poster Abstracts*, pp. 272–274. URL: https://www.christinehowes.com/papers/Somashekarappa.Howes.Sayeed_SEMDIAL_2022.pdf.

Non-archival Publications

Berman, Alexander and Christine Howes (2022). "Apparently acousticness is positively correlated with neuroticism : Conversational explanations of model predictions". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial) - Poster Abstracts*, pp. 233–235. URL: https://www.christinehowes.com/papers/Berman.Howes_SEMDIAL_2022.pdf.

Breitholtz, Ellen and Christine Howes (2022). "'He hasn't done much to keep it up': Annotating topoi in the balloon task". In: *Proceedings of the 26th Workshop On the Semantics and Pragmatics of Dialogue (DubDial) - Poster Abstracts*, pp. 224–226. URL: https://www.christinehowes.com/papers/Breitholtz.Howes_SEMDIAL_2022.pdf.

Invited Talk

Howes, Christine (2022a). *Coordinating conversation: Experiments on feedback in dialogue – Invited talk*. COLT Seminar, UPF Barcelona.

— (2022c). *Quirky conversations: How patients with schizophrenia do dialogue differently - Invited talk*. Royal Society.

Grants

ERC-2022-STG 101077927 Divergence and convergence in dialogue: The dynamic management of mismatches

Other

Member of the Evaluation Panel for COST Projects 2022, Swiss National Science Foundation (SNSF). In 2022 Christine Howes was elected as Deputy Head of the department, and she has also been appointed to the role of Head of Research.

Nikolai Ilinykh

Nikolai's main activity during 2022 was publishing papers for his thesis's core. The published papers focus on various topics related to Nikolai's thesis: evaluation of multi-modal models, training and evaluating embodied agents in virtual environments, and comparing the model's behaviour against human behaviour in multi-modal tasks. In 2022 there were four papers where Nikolai was the first author and two more papers co-authored with others at CLASP. A paper with Bill Noble is currently in the works, and an abstract from SLTC 2022 is being expanded into a full paper. Overall, Nikolai has five papers for the core of his thesis and four more papers as supporting material. In 2023, the plan is to publish more and tentatively have a defence sometimes at the end of the year.

Refereed Publications

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics".

In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: https://aclanthology.org/2022.clasp-1.4.

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Aug. 2022b). "What to refer to and when? Reference and re-reference in two language-and-vision tasks". In: *Proceedings of DubDial - Semdial 2022: The 26th Workshop on the Semantics and Pragmatics of Dialogue*. Ed. by Eleni Gregoromichelaki, Julian Hough, and John D. Kelleher. Proceedings (SemDial). Dublin, Ireland, pp. 146–159. URL: https://gup.ub.gu.se/publication/323053?lang=en.

Ilinykh, Nikolai, Rafal Černiavski, Eva Elžbieta Sventickaitė, Viktorija Buzaitė, and Simon Dobnik (June 2022b). "Examining the Effects of Language-and-Vision Data Augmentation for Generation of Descriptions of Human Faces". In: *Proceedings of the 2nd Workshop on People in Vision, Language, and the Mind*. Marseille, France: European Language Resources Association, pp. 26–40. URL: https://aclanthology.org/2022.pvlam-1.5.

Ilinykh, Nikolai and Simon Dobnik (May 2022a). "Attention as Grounding: Exploring Textual and Cross-Modal Attention on Entities and Relations in Language-and-Vision Transformer". In: *Findings of the Association for Computational Linguistics: ACL 2022*. Association for Computational Linguistics. Dublin, Ireland, pp. 4062–4073. URL: https://gup.ub.gu.se/publication/317460?lang=en.

— (May 2022b). "Attention as Grounding: Exploring Textual and Cross-Modal Attention on Entities and Relations in Language-and-Vision Transformer". In: *Findings of the Association for Computational Linguistics: ACL 2022*. Dublin, Ireland: Association for Computational Linguistics, pp. 4062–4073. DOI: 10.18653/v1/2022.findings-acl.320. URL: https://aclanthology.org/2022.findings-acl.320.

— (Dec. 2022c). "Do Decoding Algorithms Capture Discourse Structure in Multi-Modal Tasks? A Case Study of Image Paragraph Generation". In: *Proceedings of the 2nd Workshop on Natural Language Generation, Evaluation, and Metrics (GEM)*. Ed. by Antoine Bosselut, Khyathi Chandu, Kaustubh Dhole, Varun Gangal, Sebastian Gehrmann, Yacine Jernite, Jekaterina Novikova, and Laura Perez-Beltrachini. Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, pp. 480–493. URL: https://gup.ub.gu.se/publication/323067?lang=en.

Ilinykh, Nikolai, Yasmeen Emampoor, and Simon Dobnik (July 2022b). "Look and Answer the Question: On the Role of Vision in Embodied Question Answering". In: *Proceedings of the 15th International Conference on Natural Language Generation*. Waterville, Maine, USA and virtual meeting: Association for Computational Linguistics, pp. 236–245. URL: https://aclanthology.org/2022.inlg-main.19.

Non-archival Publications

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Nov. 2022a). "Towards a computational model of reference and re-reference in visual scenes". In: *Proceedings of the 9th Swedish Language Technology Conference (SLTC)*. Ed. by Jens Edlund. Stockholm, Sweden: The division of Speech, Music & Hearing

and Språkbanken Tal, KTH Royal Institute of Technology, pp. 1–7. URL: https://gup.ub.gu.se/publication/323784?lang=en.

Ilinykh, Nikolai and Simon Dobnik (Nov. 2022d). "Hallucinate or ground: how general or specific are object descriptions generated by a vision-and-language transformer?" In: *Proceedings of the 9th Swedish Language Technology Conference (SLTC)*. Ed. by Jens Edlund. Stockholm, Sweden: The division of Speech, Music & Hearing and Språkbanken Tal, KTH Royal Institute of Technology, pp. 1–6. URL: https://gup.ub.gu.se/publication/323801?lang=en.

Aram Karimi

Co-organizer for (Dis)embodiment Conference

Refereed Publications

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: https://aclanthology.org/2022.dclrl-1.6.

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Aug. 2022b). "What to refer to and when? Reference and re-reference in two language-and-vision tasks". In: *Proceedings of DubDial - Semdial 2022: The 26th Workshop on the Semantics and Pragmatics of Dialogue*. Ed. by Eleni Gregoromichelaki, Julian Hough, and John D. Kelleher. Proceedings (SemDial). Dublin, Ireland, pp. 146–159. URL: https://gup.ub.gu.se/publication/323053?lang=en.

Non-archival Publications

Amanaki, Eirini, Jean-Philippe Bernardy, Stergios Chatzikyriakidis, Robin Cooper, Simon Dobnik, Aram Karimi, Adam Ek, Eirini Chrysovalantou Giannikouri, Vasiliki Katsouli, Ilias Kolokousis, Eirini Chrysovalantou Mamatzaki, Dimitrios Papadakis, Olga Petrova, Erofili Psaltaki, Charikleia Soupiona, Effrosyni Skoulataki, and Christina Stefanidou (June 2022). "Fine-grained Entailment: Resources for Greek NLI and Precise Entailment". In: *Proceedings of the Workshop on Dataset Creation for Lower-Resourced Languages within the 13th Language Resources and Evaluation Conference*. Marseille, France: European Language Resources Association, pp. 44–52. URL: https://aclanthology.org/2022.dclrl-1.6.

Dobnik, Simon, Nikolai Ilinykh, and Aram Karimi (Aug. 2022b). "What to refer
to and when? Reference and re-reference in two language-and-vision tasks".
In: *Proceedings of DubDial - Semdial 2022: The 26th Workshop on the Semantics
and Pragmatics of Dialogue*. Ed. by Eleni Gregoromichelaki, Julian Hough,
and John D. Kelleher. Proceedings (SemDial). Dublin, Ireland, pp. 146–159.
URL: https://gup.ub.gu.se/publication/323053?lang=en.

Shalom Lappin

Refereed Publications

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom
Lappin, and Aleksandre Maskharashvili (2022a). "Bayesian Inference Se-
mantics for Natural Language". In: *Probabilistic Approaches to Linguistic
Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyri-
akidis, Shalom Lappin, and Aleksandre Maskharashvili. Stanford CA: CSLI
Publications.
Bernardy, Jean-Philippe and Shalom Lappin (2022b). "A Neural Model for
Compositional Word Embeddings and Sentence Processing". In: *Proceedings
of the Workshop on Cognitive Modeling and Computational Linguistics*. Dublin:
Association of Computational Linguistics, pp. 12–22.
— (2022c). "Assessing the Unitary RNN as an End-to-End Compositional
Model of Syntax". In: *End-to-End Compositional Models of Vector-Based Se-
mantics (E2ECOMPVEC)*. Ed. by M. Moortgat and G. Wijnholds. Electronic
Proceedings in Theoretical Computer Science, pp. 9–22.
— (2022e). "Unitary Recurrent Networks: Algebraic and Linear Structures for
Syntax". In: *Algebraic Structures in Natural Language*. Ed. by Shalom Lappin
and Jean-Philippe Bernardy. Boca Raton, Oxford: Taylor and Francis, CRC
Press.

Edited Collections

Bernardy, Jean-Philippe, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lap-
pin, and Aleksandre Maskharashvili, eds. (2022b). *Probabilistic Approaches to
Linguistic Theory*. Stanford CA: CSLI Publications.
Lappin, Shalom and Jean-Philippe Bernardy, eds. (2022). *Algebraic Structures in
Natural Language*. Boca Raton, Oxford: Taylor and Francis, CRC Press.

Invited Talk

Deep Neural Networks as Models of Linguistic Knowledge, Association of Italian
Linguistics, Naples, June 9, 2022

Grant

CI on VR grant NeSSy: Neuro-Symbolic Synthesis via Reinforcement Learning,
PI Moa Johansson (Chalmers), additional CI Devdatt Dubhashi (Chalmers), VR

Other Scientific Activities

20% appointment as Professor of Natural Language Processing in the School of Electronic Engineering and Computer Science, Queen Mary University of London

Staffan Larsson

Refereed Publications

Carrión Del Fresno, Andrea, Vladislav Maraev, and Staffan Larsson (Aug. 2022). "Dialogue strategies for... cómo se dice entrenamiento de vocabulario?" In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. Dublin, Ireland: SEMDIAL. URL: `http://semdial.org/anthology/Z22-Carrion-Del-Fresno_semdial_0006.pdf`.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: `https://aclanthology.org/2022.clasp-1.4`.

Khojah, Ranim, Alexander Berman, and Staffan Larsson (Sept. 2022). "Evaluating N-best Calibration of Natural Language Understanding for Dialogue Systems". In: *Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue*. Edinburgh, UK: Association for Computational Linguistics, pp. 582–594. URL: `https://aclanthology.org/2022.sigdial-1.54`.

Noble, Bill, Staffan Larsson, and Robin Cooper (Aug. 2022a). "Classification Systems: Combining Taxonomical and Perceptual Lexical Meaning". In: *Proceedings of the 3rd Natural Logic Meets Machine Learning Workshop (NALOMA III)*. Galway, Ireland: Association for Computational Linguistics, pp. 11–16. URL: `https://aclanthology.org/2022.naloma-1.2`.

— (Aug. 2022b). "Coordinating Taxonomical and Observational Meaning: The Case of Genus-Differentia Definitions". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. URL: `http://semdial.org/anthology/papers/Z/Z22/Z22-3020`.

Non-archival Publications

Fresno, Andrea Carrion del, Staffan Larsson, and Vladislav Maraev (2022). *Dialogue strategies for... hur säger man ordförrådsträning?* Swedish Language Technology Conference 2022. URL: `https://gup.ub.gu.se/publications/show/323104`.

Larsson, Staffan (2022). *Dialogue systems and EdTech*. Swedish Dialogue Workshop 2022. URL: `https://gup.ub.gu.se/publications/show/323104`.

Sharid Loáiciga

Refereed Publications

Loáiciga, Sharid (2022a). "Analysis of Discourse Deixis and Entity Representations – From Constructed Data to Deep Neural Networks". In: *Algebraic Structures in Natural Language*. Ed. by Shalom Lappin and Jean-Philippe Bernardy. Boca Raton and Oxford: Taylor and Francis, CRC Press.

Loáiciga, Sharid, Anne Beyer, and David Schlangen (Oct. 2022). "New or Old? Exploring How Pre-Trained Language Models Represent Discourse Entities". In: *Proceedings of the 29th International Conference on Computational Linguistics*. Gyeongju, Republic of Korea: International Committee on Computational Linguistics, pp. 875–886. URL: https://aclanthology.org/2022.coling-1.73.

Loáiciga, Sharid, Simon Dobnik, and David Schlangen (Oct. 2022b). "Anaphoric Phenomena in Situated dialog: A First Round of Annotations". In: *Proceedings of the Fifth Workshop on Computational Models of Reference, Anaphora and Coreference*. Gyeongju, Republic of Korea: Association for Computational Linguistics, pp. 31–37. URL: https://aclanthology.org/2022.crac-1.4.

Invited Talks

Loáiciga, Sharid (2022b). *Annotation of Anaphoric Phenomena in Situated Dialog*. Talk at Queen Mary University London, May 24th.

— (2022c). *Bringing together Anaphora Resolution and Linguistic Theory*. Keynote talk at the Fifth Workshop on Computational Models of Reference, Anaphora and Coreference (CRAC), October 16h.

Vladislav Maraev

In August 2022 Vladislav successfully defended his PhD thesis entitled "Who is laughing now? Laughter-Infused Dialogue Systems" (opponent: Prof. Matthew Stone, Rutgers School of Arts and Sciences). Vladislav is currently working as a postdoctoral researcher at the Department of Applied IT, Division of Cognition and Communication at the University of Gothenburg. His research concerns learning in artificial environments and cognitive models based on AI.

Conference participation - Andrea Carrión del Fresno, Staffan Larsson and Vladislav Maraev "Dialogue strategies for... hur säger man ordförrådsträning?" (2022) Swedish Language Technology Conference 2022 (SLTC-2022), November 23-24, Stockholm, Sweden.

Refereed Publications

Carrión Del Fresno, Andrea, Vladislav Maraev, and Staffan Larsson (Aug. 2022). "Dialogue strategies for... cómo se dice entrenamiento de vocabulario?" In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. Dublin, Ireland: SEMDIAL. URL: http://semdial.org/anthology/Z22-Carrion-Del-Fresno_semdial_0006.pdf.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: `https://aclanthology.org/2022.clasp-1.4`.

Maraev, Vladislav (2022). "Who is laughing now? Laughter-infused dialogue systems". PhD thesis. University of Gothenburg.

Mills, Gregory, Eleni Gregoromichelaki, Chris Howes, and Vladislav Maraev (2021). "Influencing laughter with AI-mediated communication". In: *Interaction Studies* 22.3, pp. 416–463.

Noble, Bill, Vladislav Maraev, and Ellen Breitholtz (Dec. 2022). "Probabilistic Pragmatics: A Dialogical Perspective". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Center for the Study of Language and Information, pp. 227–259. ISBN: 978-1-68400-079-1.

Non-archival Publications

Fresno, Andrea Carrion del, Staffan Larsson, and Vladislav Maraev (2022). *Dialogue strategies for... hur säger man ordförrådsträning?* Swedish Language Technology Conference 2022. URL: `https://gup.ub.gu.se/publications/show/323104`.

Bill Noble

Bill's main focus at the moment is putting together his compilation thesis, writing the kappa, and preparing for the defense. He has completed work on six papers that will be part of his compilation thesis. He has received reviewer comments on a seventh paper, co-authored with Nikolai Ilinykh, which they will address in early January for inclusion in the thesis. The thesis defense is tentatively planned for mid-April.

Refereed Publications

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: `https://aclanthology.org/2022.clasp-1.4`.

Khan, Fahima Ayub and Bill Noble (Aug. 2022). "Investigating Code-Switching and Disfluencies in Bilingual Dialogue". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Poster Abstracts*. URL: `http://semdial.org/anthology/papers/Z/Z22/Z22-4033/`.

Noble, Bill and Jean-Philippe Bernardy (Dec. 2022). "Conditional Language Models for Community-Level Linguistic Variation". In: *Proceedings of the 5th Workshop on NLP+CSS at EMNLP 2022*. Abu Dabi, p. 20. URL: https://aclanthology.org/venues/nlpcss/.

Noble, Bill, Staffan Larsson, and Robin Cooper (Aug. 2022a). "Classification Systems: Combining Taxonomical and Perceptual Lexical Meaning". In: *Proceedings of the 3rd Natural Logic Meets Machine Learning Workshop (NALOMA III)*. Galway, Ireland: Association for Computational Linguistics, pp. 11–16. URL: https://aclanthology.org/2022.naloma-1.2.

— (Aug. 2022b). "Coordinating Taxonomical and Observational Meaning: The Case of Genus-Differentia Definitions". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue - Full Papers*. URL: http://semdial.org/anthology/papers/Z/Z22/Z22-3020.

Noble, Bill, Vladislav Maraev, and Ellen Breitholtz (Dec. 2022). "Probabilistic Pragmatics: A Dialogical Perspective". In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy, Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre Maskharashvili. Center for the Study of Language and Information, pp. 227–259. ISBN: 978-1-68400-079-1.

Invited talks and seminars:

Grounded Language Learning through Interaction. CLASP Seminar. May 4, 2022

Language modeling for linguistic variation and change. COLT Seminar, UPF Barcelona. October 28, 2022

Asad Sayeed

Refereed Publications

Hertzberg, Niclas, Robin Cooper, Elina Lindgren, Björn Rönnerstrand, Gregor Rettenegger, Ellen Breitholtz, and Asad Sayeed (July 2022). "Distributional properties of political dogwhistle representations in Swedish BERT". In: *Proceedings of the Sixth Workshop on Online Abuse and Harms (WOAH)*. Seattle, Washington (Hybrid): Association for Computational Linguistics, pp. 170–175. DOI: 10.18653/v1/2022.woah-1.16. URL: https://aclanthology.org/2022.woah-1.16.

Marton, Yuval and Asad Sayeed (2022). "Thematic Fit Bits: Annotation Quality and Quantity Interplay for Event Participant Representation". In: *Proceedings of the Thirteenth Language Resources and Evaluation Conference*. Marseille, France.

Muthupari, Mughilan, Samrat Halder, Yuval Marton, and Asad Sayeed (2022). "Where's the Learning in Representation Learning for Compositional Semantics and the Case of Thematic Fit". In: *Proceedings of the Fifth BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP*. Abu Dhabi, UAE.

Somashekarappa, Vidya, Christine Howes, and Asad Sayeed (Aug. 2022b). "Mutual gaze detection and estimation: towards human-robot interaction". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue*, Dublin, Ireland.

Edited Conference Proceedings

Dobnik, Simon, Julian Grove, and Asad Sayeed, eds. (Sept. 2022). *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. 4. Special Interest Group on Computational Semantics (SIGSEM). Gothenburg, Sweden: The Association for Computer Linguistics (ACL). URL: `https://gup.ub.gu.se/publication/322913?lang=en`.

Non-archival Publications

Arora, Aashish, Harshitha Malireddi, Daniel Bauer, Asad Sayeed, and Yuval Marton (2022). *Multi-Task Learning for Joint Semantic Role and Proto-Role Labeling*. DOI: `10.48550/ARXIV.2210.07270`. URL: `https://arxiv.org/abs/2210.07270`.

Vidya Somashekarappa

Refereed Publications

Bolgina, Tatiana, Vidya Somashekarappa, Stefano Cappa, Zoya Cherkasova, Matteo Feurra, Svetlana Malyutina, Anna Sapuntsova, Yury Shtyrov, and Olga Dragoy (Oct. 2022). "Repetitive transcranial magnetic stimulation modulates action naming over the left but not right inferior frontal gyrus". In: *Brain Structure and Function* 227, pp. 1–12. DOI: `10.1007/s00429-022-02574-y`.

Dobnik, Simon, Robin Cooper, Adam Ek, Bill Noble, Staffan Larsson, Nikolai Ilinykh, Vladislav Maraev, and Vidya Somashekarappa (Sept. 2022). "In Search of Meaning and Its Representations for Computational Linguistics". In: *Proceedings of the 2022 CLASP Conference on (Dis)embodiment*. Gothenburg, Sweden: Association for Computational Linguistics, pp. 30–44. URL: `https://aclanthology.org/2022.clasp-1.4`.

Prasad, Seema, Gouri Patil, Vidya Somashekarappa, and Ramesh Mishra (Jan. 2022). "Attention capture by brief abrupt-onset cues in deaf individuals". In: *Neuropsychologia* 167, p. 108157. DOI: `10.1016/j.neuropsychologia.2022.108157`.

Somashekarappa, Vidya (Oct. 2022). "Implementation of Gaze Estimation in Dialogue to Human-Robot Interaction". In: *Proceedings of the 10th International Conference on Affective Computing & Intelligent Interaction*. Nara, Japan: Association for the Advancement of Affective Computing.

Somashekarappa, Vidya, Christine Howes, and Asad Sayeed (Aug. 2022b). "Mutual gaze detection and estimation: towards human-robot interaction". In: *Proceedings of the 26th Workshop on the Semantics and Pragmatics of Dialogue*, Dublin, Ireland.

Vidya, Somashekarappa (2022). "Neuro-computation for Language Processing".
In: *Probabilistic Approaches to Linguistic Theory*. Ed. by Jean-Philippe Bernardy,
Rasmus Blanck, Stergios Chatzikyriakidis, Shalom Lappin, and Aleksandre
Maskharashvili. Stanford CA: CSLI Publications.