



The SignGram Blueprint

COST Action IS 1006 (2011-2015)

SIGNGRAM

Carlo Cecchetto & Josep Quer

Università di Milano-Bicocca & ICREA-Universitat
Pompeu Fabra, Barcelona



COST is supported by the EU
Framework Programme Horizon 2020





search this site

[Home](#) | [Access](#) | [Contact](#)

COST SignGram

- ▼ About the action
 - Objectives
 - Management committee
 - Work plan
 - Agenda
- Participants
- Events and news
- ▼ Output
 - Conferences
 - Publications
 - STGMs
 - Training & collaborations
- ▼ Resources
 - Bibliographical database
 - Repository of materials

There are currently 0 users online.

COST SignGram



Individuals, Societies, Cultures and Health
COST Action IS1006

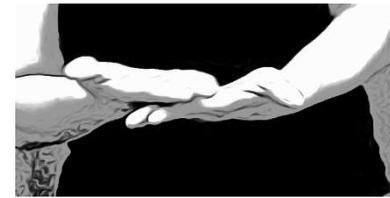
**Unraveling the grammars of European sign languages:
pathways to full citizenship of deaf signers and to the protection of their
linguistic heritage.**



Background (1/2)

Sign languages (SLs) are traditionally denied the **status of natural languages**:

- Discrimination of signing communities
- No full citizenship
- Ignorance about such European linguistic and cultural heritage.





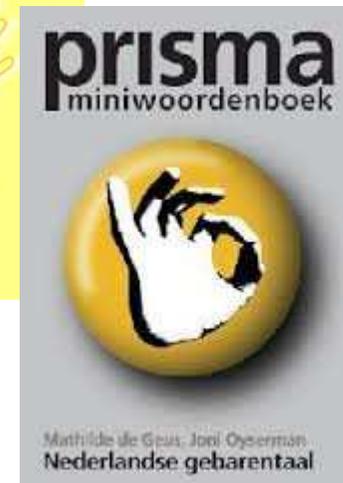
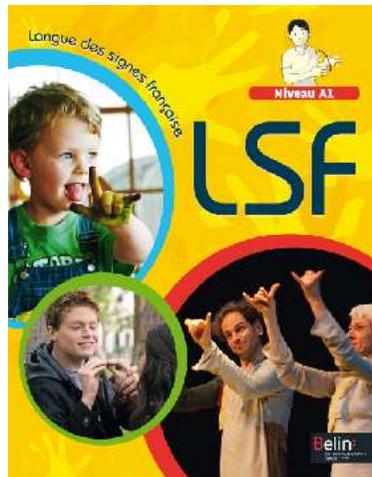
Background (2/2)

- Grammatical knowledge about SLs is very limited and fragmentary.
- Public policies in education and accessibility for European signers are severely jeopardized.
- Scientific study of human language extremely biased towards spoken languages.



Reference grammars and language transmission (1/3)

- Reference grammars are key tools for **language documentation**, but also the basis for **teaching materials**.



Reference grammars and language transmission (2/3)

- Many deaf and hearing signers are exposed to signs after the sensitive period for language acquisition → **sign language teaching (L1/L2)** and **interpreter training** play an important role in sign language transmission.



Reference grammars and language transmission (3/3)

- The absence of reliable descriptions of sign language grammar results in language programs focusing mostly on lexicon, **neglecting grammatical aspects** that are a core component of the languages.





A side effect of the lack of reference grammars

- Lack of grammatical descriptions has negative consequences for **special populations** of signers:
 - Children with Specific Language Impairment (SLI)
 - Aphasia patients
 - Elderly signers with neurodegenerative diseases.
- **Diagnosing** grammatical impairments and planning intervention of any type is presently very difficult, since no baseline is available.

13 COST countries, 14 SLs



What the *SignGram* Action did

- We provided a **Blueprint** to write reference grammars for (European) sign languages in a **new format**.





Reference grammars in a new format

- Many grammatical aspects of signs are difficult to describe in a traditional book format .
- A more effective sign language grammar should integrate **text, pictures and videos**.
- **Hyperlinking** allows for interconnectivity among descriptions in different parts of grammar.
- The output of our Action is an **e-book in PDF format** with **links to videos**. As a traditional book, **+/- 700 pages** long.
- **Open Access** publication, with DeGruyter Mouton (due in first months of 2016).



Structure of the *Blueprint*

- The Blueprint consists of two main parts:

- **Checklist**
- **Manual**





What is the Checklist?

- **Inventory of all the linguistic features** that a comprehensive grammatical description should contain.
- Based on current knowledge in the field of **sign linguistics**, but it also incorporates expertise in **descriptive and theoretical linguistics**.



What is the Manual?

It contains guidelines and background information that provide the necessary information to implement the Checklist.

- **Description** and **definition** of the phenomenon
- Representative **examples** from actual sign languages
- **Tests** that can be used to identify the phenomenon
- **Elicitation materials** that target the phenomenon
- **Bibliographical pointers** to passages/works that deal with the phenomenon
- **Methodological advice**



Checklist organization

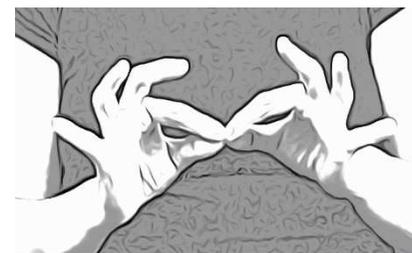
Lexicon

Phonology

Morphology

Syntax

Meaning





Checklist: Lexicon Part

1. THE NATIVE LEXICON

1.1. Core lexicon

1.2. Non-core lexicon

1.2.1. Classifier constructions

1.2.2. Pointing

1.2.3. Buoys

1.3. Interaction between core and non-core lexicon

1.3.1. Lexicalization processes

1.3.2. Modification of core lexicon signs

1.3.3. Simultaneous constructions and use of the non-dominant hand

2. THE NON-NATIVE LEXICON

2.1. Borrowings from other sign languages

2.2. Borrowings from (neighboring) spoken language

2.2.1. Calques

2.2.2. Lexicalization of fingerspelling

2.2.3. Mouthing

2.2.4. Other 'marginal' types of borrowing

2.3. Borrowings from conventionalized gestures

2.3.1. Lexical functions

2.3.2. Grammatical functions

3. PARTS OF SPEECH

3.1 Nouns

3.1.1. Common nouns

3.1.2. Proper nouns and name signs

3.2. Verbs

3.2.1. Plain verbs

3.2.2. Agreement verbs

3.3. Lexical expressions of inflectional categories

3.4. Adjectives

3.5. Adverbials

3.6. Determiners

3.7. Pronouns

3.8. Adpositions

3.9. Conjunctions

3.10. Numerals and quantifiers

3.11. Particles

3.12. Interjections

4. LEXICAL FIELDS

4.1. Kinship terms

4.2. Color terms

4.3. Weekdays and months

4.4. Idioms



Checklist: Lexicon Part

Native and not-native lexicon

1. THE NATIVE LEXICON

1.1 Core lexicon

1.2 Non-core lexicon

1.3 Interaction between
core and non-core lexicon

2. THE NON-NATIVE LEXICON

2.1. Borrowings from other
sign languages

2.2. Borrowings from
(neighboring) spoken
language

2.3. Borrowings from
conventionalized gestures



Checklist: Lexicon Part

Native and not-native lexicon

1. THE NATIVE LEXICON

1.1 Core lexicon

1.2 Non-core lexicon

1.3 Interaction between core and non-core lexicon

2. THE NON-NATIVE LEXICON

2.1. Borrowings from other sign languages

2.2. Borrowings from (neighboring) spoken language

2.3. Borrowings from conventionalized gestures



Checklist: Lexicon Part

Native and not-native lexicon

1. THE NATIVE LEXICON

1.1 Core lexicon

1.2 Non-core lexicon

1.3 Interaction between core and non-core lexicon

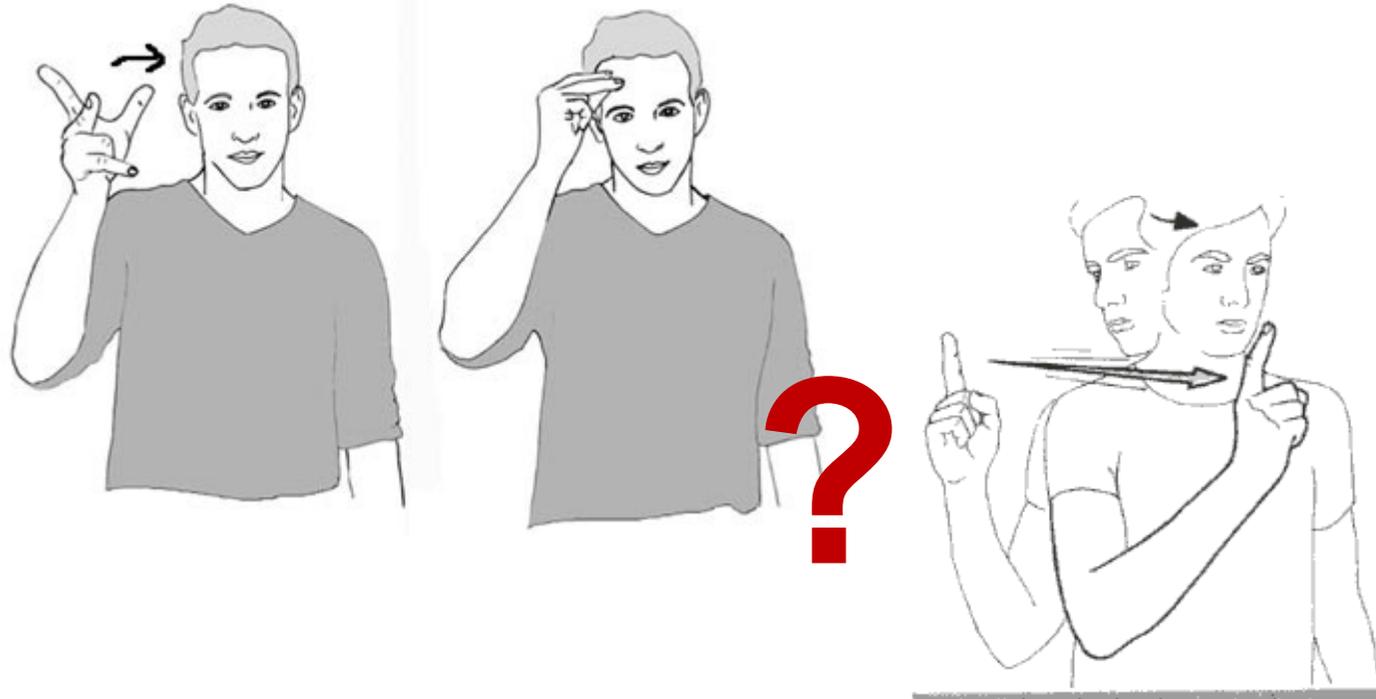
2. THE NON-NATIVE LEXICON

2.1. Borrowings from other sign languages

2.2. Borrowings from (neighboring) spoken language

2.3. Borrowings from conventionalized gestures

From *Checklist* to *Manual*: Core and non-core lexicon



Core lexicon	Non-core lexicon
Phonologically restricted in parameters and structure (subject to phonological constraints, e.g. the dominance condition).	Makes use of a wider range of parameters and frequently violates phonological constraints.
Space is exploited as the phonological parameters of location of movement.	Space and movement are used topographically/isomorphically.
Subunits are discrete and categorical; variation is allophonic.	Forms exhibit gradience: variations in form create changes in meaning.
Tend to be monomorphemic and monosyllabic.	Normally polymorphemic and may have no clear syllabic structure.
Meaning may be largely unrelated to form but is clear out of context.	The form is visually motivated by the meaning, which depends upon the discourse context.
The form of a given lexeme may show dialectal and cross-linguistic variation.	Less variation across dialects and even across languages.
May belong to any part of speech.	Frequently predicative in nature, although occasionally nominal.
Eye gaze normally directed at addressee.	Eye gaze often follows hand(s).
May be accompanied by spoken language based mouthing.	Any activity on the mouth is more likely to be a mouth gesture.



Checklist: Syntax Part

1. Sentence types
2. Clause structure
3. Coordination and subordination
4. The Noun Phrase
5. The structure of Adjectival Phrase
6. The structure of Adverbial phrase



Checklist: Syntax Part

1. **Sentence types**
2. Clause structure
3. Coordination and subordination
4. The Noun Phrase
5. The structure of Adjectival Phrase
6. The structure of Adverbial phrase

1. Sentence types

1.1. Declaratives

1.2. Interrogatives

- 1.2.1. Polar interrogatives
 - 1.2.1.1. Non-manual markers in polar interrogatives
 - 1.2.1.2. Word order changes between declaratives and polar interrogatives
 - 1.2.1.3. Interrogative particles
- 1.2.2. Alternative Interrogatives
- 1.2.3. Content interrogatives
 - 1.2.3.1. Non-manual markers in content interrogatives
 - 1.2.3.2. List of *wh*-signs
 - 1.2.3.3. Content interrogatives without *wh*-signs
 - 1.2.3.4. Non-interrogative uses of *wh*-signs
 - 1.2.3.5. Position of *wh*-signs
 - 1.2.3.6. Split between the *wh*-sign and its restriction
 - 1.2.3.7. Doubling of the *wh*-sign
 - 1.2.3.8. Multiple *wh*-signs in interrogatives
 - 1.2.3.9. Interrogative particles

1.3. Imperatives

- 1.3.1. Subtypes of imperatives
 - 1.3.1.1. Orders
 - 1.3.1.2. Invitations
 - 1.3.1.3. Suggestions/advice
 - 1.3.1.4. Permissions
 - 1.3.1.5. Instructions
 - 1.3.1.6. Recommendations
- 1.3.2. Imperative markers
 - 1.3.2.1. Manual signs
 - 1.3.2.2. Non-manual markers
- 1.3.3. Imperatives and verb classes
- 1.3.4. Word order in imperatives
- 1.3.5. Attention callers
- 1.3.6. Negation in imperatives
 - 1.3.6.1. Manual negation
 - 1.3.6.2. Non-manual negation

1. Sentence types

1.1. Declaratives

1.2. Interrogatives

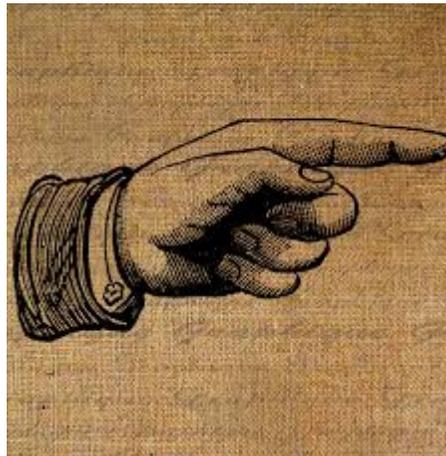
- 1.2.1. Polar interrogatives
 - 1.2.1.1. Non-manual markers in polar interrogatives
 - 1.2.1.2. Word order changes between declaratives and polar interrogatives
 - 1.2.1.3. Interrogative particles
- 1.2.2. Alternative Interrogatives
- 1.2.3. Content interrogatives
 - 1.2.3.1. Non-manual markers in content interrogatives
 - 1.2.3.2. List of *wh*-signs
 - 1.2.3.3. Content interrogatives without *wh*-signs
 - 1.2.3.4. Non-interrogative uses of *wh*-signs
 - 1.2.3.5. Position of *wh*-signs
 - 1.2.3.6. Split between the *wh*-sign and its restriction
 - 1.2.3.7. Doubling of the *wh*-sign
 - 1.2.3.8. Multiple *wh*-signs in interrogatives
 - 1.2.3.9. Interrogative particles

1.3. Imperatives

- 1.3.1. Subtypes of imperatives
 - 1.3.1.1. Orders
 - 1.3.1.2. Invitations
 - 1.3.1.3. Suggestions/advice
 - 1.3.1.4. Permissions
 - 1.3.1.5. Instructions
 - 1.3.1.6. Recommendations
- 1.3.2. Imperative markers
 - 1.3.2.1. Manual signs**
 - 1.3.2.2. Non-manual markers
- 1.3.3. Imperatives and verb classes
- 1.3.4. Word order in imperatives
- 1.3.5. Attention callers
- 1.3.6. Negation in imperatives
 - 1.3.6.1. Manual negation
 - 1.3.6.2. Non-manual negation



From *Checklist* to *Manual*: Manual signs for imperatives



1.3.2.1. Manual signs

Some spoken languages have been reported to mark imperative predicates with specific syntactic morphemes. This is the case for example of Badiotto, a dialect spoken in Northeastern Italy...

The grammar writer should verify the presence of specific morpho-syntactic manual markings expressing the imperative modality in the sign language (s)he is describing.

A manual sign attested in some sign languages, including LIS and NGT, is the sign conventionally glossed PALM-UP (PU)

EAT-PU
You eat!



(LIS)



Checklist: Meaning Part

1. The meaning of words and sentences
2. Meaning in discourse





Checklist: Meaning Part

1. The meaning of words and sentences

2. Meaning in discourse





2. Meaning in discourse

- 2.1. Reference
- 2.2. Reference tracking
- 2.3. Speech acts
- 2.4. Information structure
- 2.5. Structure of discourse
- 2.6. Reporting and role shift
- 2.7. Expressive meaning
- 2.8. Semantic use of signing space
- 2.9. Figurative meaning
- 2.10. Communicative interaction
- 2.11. Register and politeness



2. Meaning in discourse

2.1. Reference

2.2. Reference tracking

2.3. Speech acts

2.4. Information structure

2.5. Structure of discourse

2.6. Reporting and role shift

2.7. Expressive meaning

2.8. Semantic use of signing space

2.9. Figurative meaning

2.10. Communicative interaction

2.11. Register and politeness



2.1 Reference

2.1.1 Deixis

2.1.2. Definiteness

2.1.2.1. Manual marking of definiteness

2.1.2.2. Non-manual marking of definiteness

2.1.3. Indefiniteness

2.1.4. Specificity

2.1.5. Impersonal reference



2.1 Reference

2.1.1 Deixis

2.1.2. Definiteness

2.1.2.1. Manual marking of definiteness

2.1.2.2. Non-manual marking of definiteness

2.1.3. Indefiniteness

2.1.4. Specificity

2.1.5. Impersonal reference

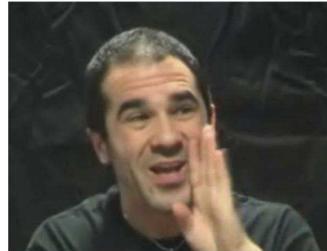
2.1.2.2 Non-manual marking of definiteness

In some sign languages, the co-articulation of squinted eyes on the noun phrase denotes discourse referents that are both known and familiar by the discourse participants. This has been attested for ASL, ISL, DSL, LSC.

sq. eyes

IX₁ COLLEAGUE WORK HARD [DSL]

'My colleague (the one that you know) works hard



Raised eyebrows (**topic** marking) also marks shared knowledge of the referent being talked about.

In NGT, the nose wrinkle signals shared knowledge.

n. wrinkle

MY FRIEND LETTER SEND₁ [NGT]

'My friend (you know who I mean) sent me a letter.'

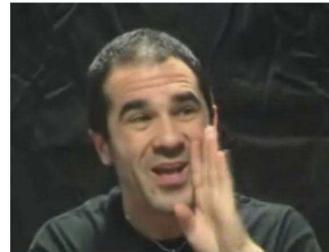
2.1.2.2 Non-manual marking of definiteness

In some sign languages, the co-articulation of squinted eyes on the noun phrase denotes discourse referents that are both known and familiar by the discourse participants. This has been attested for ASL, ISL, DSL, LSC.

sq. eyes

IX₁ COLLEAGUE WORK HARD [DSL]

'My colleague (the one that you know) works hard



Raised eyebrows (**topic** marking) also marks shared knowledge of the referent being talked about.

In NGT, the nose wrinkle signals shared knowledge.

n. wrinkle

MY FRIEND LETTER SEND₁ [NGT]

'My friend (you know who I mean) sent me a letter.'

2.1.2.2 Non-manual marking of definiteness

In some sign languages, the co-articulation of squinted eyes on the noun phrase denotes discourse referents that are both known and familiar by the discourse participants. This has been attested for ASL, ISL, DSI, LSC.

sq.
IX₁ COLL
'My collea

TOPIC: A constituent referring to an individual or entity that is already under discussion, and which the sentence is understood to be commenting on.

Raised eyebrows (**topic** marking) also marks shared knowledge of the referent being talked about.

In NGT, the nose wrinkle signals shared knowledge.

n. wrink
MY FRIEND LETTER SEND₁ [NGT]
'My friend (you know who I mean) sent me a letter.'

Challenges

- Some SL **properties that rely on the visual-gestural modality** (e.g. phonology, agreement, classifiers, spatial constructions) need to be addressed from scratch from the perspective of descriptive grammars.
- One example: **Role Shift.**





The challenge of role shift (1/3)

- Strategy that sign languages typically use to report speech or attitudes (SAY, THINK...).
- Marked overtly with an array of non-manuals:
 - Eyegaze break
 - Body shift
 - Facial expression
- Referential displacement
- Properties of both direct and indirect report



The challenge of role shift (2/3)

- Regular embedding vs. Quote?
- Not only reported speech, used in attitude reports more generally
- Intertwined with “constructed action”, a gestural enactment of cooccurring activities



The challenge of role shift (3/3)

- If Role Shift is a case of subordination, it should be dealt with in the *Syntax* part of the Checklist.
- If not, it should be treated together with “constructed action” in the *Meaning* part of the Checklist.



Our solution





Checklist: Meaning part

- 2.1. Reference
- 2.2. Reference tracking
- 2.3. Speech acts
- 2.4. Information structure
- 2.5. Structure of discourse
- 2.6. Reporting and role shift
- 2.7. Expressive meaning
- 2.8. Semantic use of signing space
- 2.9. Figurative meaning
- 2.10. Communicative interaction
- 2.11. Register and politeness

Checklist: Syntax part

- 3.3. Argument clauses
 - 3.3.1. Subject clauses
 - 3.3.2. Object clauses
 - 3.3.3. Role shift
 - 3.3.3.1. Markers of role shift
 - 3.3.3.2. Integration of the role shifted clause into the main clause
 - 3.3.3.3. Syntactic contexts introducing attitude role shift
 - 3.3.3.4. Special signs introducing action role shift
 - 3.3.3.5. Syntactic differences between action role shift and attitude role shift
 - 3.3.3.6. Elicitation materials for role shift



Checklist: Meaning part

- 2.1. Reference
- 2.2. Reference tracking
- 2.3. Speech acts
- 2.4. Information structure
- 2.5. Structure of discourse
- 2.6. Reporting and role shift**
- 2.7. Expressive meaning
- 2.8. Semantic use of signing space
- 2.9. Figurative meaning
- 2.10. Communicative interaction
- 2.11. Register and politeness

Checklist: Syntax part

- 3.3. Argument clauses
 - 3.3.1. Subject clauses
 - 3.3.2. Object clauses
 - 3.3.3. Role shift
 - 3.3.3.1. Markers of role shift
 - 3.3.3.2. Integration of the role shifted clause into the main clause**
 - 3.3.3.3. Syntactic contexts introducing attitude role shift
 - 3.3.3.4. Special signs introducing action role shift
 - 3.3.3.5. Syntactic differences between action role shift and attitude role shift
 - 3.3.3.6. Elicitation materials for role shift



3.3.3.2 Integration of the role-shifted clause into the main clause

One test used in section 3.3.3.2 to decide whether role-shift is a genuine case of subordination involves *long distance dependencies*, in which a certain phrase (say, a wh-phrase) occupies a position different from the one in which it is interpreted. If a wh-phrase can be extracted from a role-shifted context, role-shift involves a genuine case of subordination in the language under investigation.

.....[Role shift.....WH.....]



3.3.3.2 Integration of the role-shifted clause into the main clause

One test used in section 3.3.3.2 to decide whether role-shift is a genuine case of subordination involves *long distance dependencies*, in which a certain phrase (say, a wh-phrase) occupies a position different from the one in which it is interpreted. If a wh-phrase can be extracted from a role-shifted context, role-shift involves a genuine case of subordination in the language under investigation.





Conclusions

- Innovative tool in the field of sign language research.
- Implementable as an electronic platform to develop (SL) grammars online.
- Despite challenges, it should make a difference in documenting SLs around the globe: actual grammars based on the Blueprint are the next step!
- It should also make a difference in offering a scientific basis for sign language related policies.



<http://www.signgram.eu>



THANKS, THANKS, THANKS!!!

- SignGram COST Action Participants
- Vicechair, actually co-Chair, Carlo Cecchetto
- Gemma Barberà, for running the administration smoothly
- Core group: Carlo Geraci, Caterina Donati, Meltem Kelepir, Roland Pfau, Markus Steinbach.



THANKS, THANKS, THANKS!!!

- Interpreters : Oliver Pouliot, Chris Stone, Lissa Zeviar (Overseas Interpreting)
- COST officers : Luule Mizera & Valentina Vignoli, and previous officers
- DC Rapporteurs : Alain Peyraube, Jean Dubucs



THANKS, THANKS, THANKS!!!

- Members of the LSC Lab and Formal Linguistics Group (GLiF)

- Delfina Aliaga
- Santi Frigola
- Fabiola Otárola
- Sílvia Gabarró
- Sara Cañas
- Toni Bassaganyas
- Giorgia Zorzi
- Alexandra Navarrete



THANKS, THANKS, THANKS!!!

- The COST Association
- ERC grant “New Frontiers in Formal Semantics” (Philippe Schlenker, IJN Paris)
- Department of Translation and Language Sciences, UPF