

## **AG 4: Learning meets acquisition: the learnability of linguistic frameworks from formal and cognitive perspectives**

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The workshop brings together researchers working on the learnability of linguistic models from a formal point, with those working on the models' cognitive adequacy. In general, studies on the learnability of language account for how grammar and lexicon of a language can be learnt, and by what means. To give an example, considerable progress has been made recently in connectionist-based frameworks such as Optimality Theory (Prince & Smolensky 1993) and Harmonic Grammar (Legendre et al. 1990). Most learnability models within OT deal with the learning of the grammar: learning of constraint hierarchies, and learning of constraints themselves. In most of these approaches, lexical information is already given. Other OT approaches tackle the learning of parts of the lexicon. Differences between approaches include whether lexicon and grammar are learnt in turns (offline) or in parallel (online), or whether the OT grammar to be learnt is traditional or stochastic. Current approaches to learnability within HG include learning constraint weights, by using learning algorithms such as the perceptron algorithm. Yet, formal results have been only seldom tested against empirical data from language acquisition research.

The workshop will not only capture the State-of-the-Art in current approaches to learnability, but also point out future developments in this field, especially those pertaining to cognitive adequacy. Questions to be addressed in the workshop include:

- What are appropriate computational models of the formalizations and why?
- What is the cognitive and psycholinguistic plausibility of these models?
- How does the research on formal models of learnability relate to (psycholinguistic) research on language acquisition? Is there a "missing link"?
- How can the learnability of interfaces (e.g., syntax-phonology, semantics-phonology) be formalized?
- How can learnability account for diachronic aspects of language?

We invite anybody working within any well-established contemporary linguistic framework (including phonology, syntax or semantics, let it be GB, the Minimalist Program, OT, LFG or HPSG among many others), and who tackles its learnability from a theoretical, formal or cognitive perspective. Especially invited are contributions that contrast the learnability of a framework with empirical data (from language acquisition, language change or psycholinguistic experiments).

### **References:**

- Prince, A. & P. Smolensky (1993/2004). *Optimality Theory: constraint interaction in generative grammar*. RuCCS-TR-2. Rutgers Center for Cognitive Science.
- Legendre, G., Miyata, Y. & P. Smolensky (1990). *Harmonic grammar - a formal multi-level theory of linguistic well-formedness: An application*. Proceedings of the 12th Annual Cognitive Science Society Conference, Hillsdale, NJ. Lawrence Erlbaum Associates.