

## **German morphotactic clusters: native speaker processing and neural activation functions**

Basilio Calderone, Chiara Celata, Wolfgang U. Dressler, Katharina Korecky-Kröll & Irene Ricci

In this talk, we report on our psycholinguistic and computational investigation currently developed within the 2011-2012 ESF-funded collaborative project “Phonotactic effects on morphological structure – Psycho-computational studies on Italian, French, English and German”.

In particular, we present the results of a computational experiment on German which has been run with the PHACTS algorithm for phonotactic generalizations ([1,2]), as well as the preliminary results of a behavioral experiment with Austrian German native speakers. Both experiments deal with the morphotactic hypothesis ([3,4]), according to which morphologically produced clusters are treated differently than morpheme internal clusters in language processing and acquisition.

We basically are interested in verifying whether such disparity in clusters’ treatment surfaces at the level of phonotactic processing.

### *References*

- [1] Calderone, B. & C. Celata (2012) “PHACTS about activation-based word similarity effects”. In *Proceedings of EACL 2012*. Avignon, April 24th, 2012.
- [2] Celata, C., B. Calderone & F. Montermini (2011) “Enriched sublexical representations to access morphological structure: A psycho-computational account”. *TAL-Traitement Automatique du Langage* 52 (2), 123-149.
- [3] Dressler, W.U. & K. Dziubalska-Kolaczyk (2006) “Proposing morphotactics”. *Italian Journal of Linguistics* 18, 249-266.
- [4] Freiberger, E. M., C. Abbrederis, F. Luckabauer & M. Stammner (2011) “Morphotaktik in der Sprachverarbeitung: Online- und Offline-Tests mit deutschsprachigen Erwachsenen”. *Wiener Linguistische Gazette* 75, 33-52.