Rabea Landgraf

Main research interests: phonetics and phonology, especially w.r.t. Lombard speech, forms and functions of prominence and emphatic accentuation, turn-taking and phonetic convergence in dialogues.

Curriculum Vitae

2007 - 2011: Bachelor of Arts (B.A.) at Kiel University, Empirical Linguistics / European Ethnology.

2011 - 2014: Master of Arts (M.A.) at Kiel University, Language documentation and Corpus Linguistics / European Ethnology.

Since 2014 PhD project, "The effects of communication enhancement systems on natural spoken dialogues in cars", supervised by Oliver Niebuhr, Assoc. Prof. of Communication and Innovation, Innovation Research Cluster Alsion (IRCA), University of Southern Denmark, Sonderborg.

Selected publications and talks

Landgraf, R. (2014). Are you serious? Irony and the perception of emphatic intensification. Proceedings of the 4th International Symposium on Tonal Aspects of Languages (TAL), Nijmegen, Netherlands, 91-94.

John, T., R. Landgraf, C. Lüke, S. Rohde, G. Schmidt, A. Theiß, J. Withopf (2014). Über die Verbesserung der Sprachkommunikation in geräuschbehafteten Umgebungen. In: Oliver Niebuhr (ed.): Formen des Nicht-Verstehens, (pp. 185-203). Frankfurt, Peter Lang.

Niebuhr, O., B. Peters, R. Landgraf, G. Schmidt (2015). The Kiel Corpora of "Speech & Emotion" - A Summary. 41. Jahrestagung für Akustik (DAGA). Nürnberg, Deutschland. S. 1011-1014.

Landgraf, R. (2015). Simulating complex speech-production environments. In: O. Niebuhr, R. Skarnitzl (eds), Tackling the Complexity of Speech (pp. 97-110). Epocha, Prague.

Landgraf, R., J. Köhler-Kaeß, C. Lüke, O. Niebuhr, G. Schmidt (2016). Can you hear me now? Reducing the Lombard effect in a driving car using an In-Car Communication system. Proc. 8th International Conference of Speech Prosody, Boston, USA, 1-5.

PhD project

"The effects of communication enhancement systems on natural spoken dialogues in cars"

Speech communication inside a car is often influenced by loud driving noises. This is where so-called In-Car Communication systems (ICC) come into play. They transmit speech signals from the speaker to the listeners, in this way aiming to enhance communication. However, as stressed by the CARIN project of IRCA (http://www.sdu.dk/en/om_sdu/institutter_centre/irca/activities/research_projects), the modifications of speech production in noisy environments (i.e. "Lombard effects") not merely concern (an increase in) the loudness level of spoken language. Rather, they involve a whole set of parameters such as pitch, turn-taking, speaking rate, utterance duration, and gestures. In consequence, ICC systems have to be adjusted to this wide range of modifications that characterize speech production inside a driving car.

My PhD project is carried out based on a collaboration between the Kiel faculty of engineering (Digital Signal Processing and System Theory, Prof. Gerhard Schmidt) and the Innovation Research Cluster Alsion (IRCA), with Mercedes-Benz being the major industry partner who also provided the cars in which the speech-production experiments with different ICC conditions took place. The PhD project aims to evaluate the effects of ICC by means of the key parameters involved in the Lombard effect. Using an acoustic and visual ambiance simulation at Kiel University, dialogue recordings were conducted, annotated, and compiled to one of the worldwide biggest resources of speech inside a car: the SPID corpus (SPontaneous In-car Dialogues).